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Official Year Book of the Commonwealth of Australia.

4400.

OFFICIAL YEAR BOOK OF THE COMMONWEALTH
OF AUSTRALIA

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Australia
~~COMMONWEALTH~~ BUREAU OF CENSUS AND STATISTICS,
CANBERRA.

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OFFICIAL

YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA

No. 37.—1946 and 1947.

Prepared under Instructions from
The Right Honorable the Treasurer,

BY

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COMMONWEALTH STATISTICIAN.

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PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the thirty-seventh Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. ix to xxvi immediately following shows the general arrangement of the work. The special index (following the usual general index) provided at the end of the volume, together with certain references given in the various Chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, owing to limitations of space, have been omitted or are not printed fully in the present volume.

Economic and financial conditions during recent years have caused a demand for new information, or information expressed in new terms, concerning many matters of finance, trade, prices, production and population, and some progress has been made in the later volumes towards bringing closer to present day requirements the Chapters dealing with these branches of statistics, while a diary of the principal financial and economic events of the years 1945 to 1948 is inserted after the last chapter.

It is not proposed to refer here to the whole of the new matter or to the new treatment of existing matter incorporated in the present volume, but attention may be drawn to the following :—

Chapter II. Physiography.—New map on Evaporation (pp. 41–2).
Chapter III. General Government.—Schemes for Pensions, Retiring Allowances, etc., for Members of Parliament (Commonwealth p. 1247, New South Wales, p. 66, Victoria, p. 68, Queensland, p. 1248, South Australia, p. 1248, and Western Australia, pp. 70 and 1249).; Commonwealth Government Departments—Matters dealt with and Acts administered (pp. 76–86).
Chapter IV. Land Tenure and Settlement.—Settlement of Returned Service Personnel: 1939–45 War (pp. 113–9).
Chapter V. Transport and Communication.—Post-war Control of Shipping (pp. 142–4); Maps showing Railway Systems (pp. 155–6) and Air Routes (pp. 191–2); Aviation Development in Australia and Overseas (pp. 181–94); Overseas Telecommunications Commission (pp. 220–4).
Chapter VI. Education.—The Australian National University (pp. 241–2); The Commonwealth Office of Education (pp. 243–4); Libraries, Museums and Art Galleries (pp. 254–65).
Chapter VIII. Public Benevolence, etc.—Commonwealth Unemployment and Sickness Benefits (pp. 304–8).
Chapter X. The Territories of Australia.—Northern Territory—Legislative Council (p. 328), System of Land Tenure (pp. 331–3), Education Facilities (p. 335); Australian Capital Territory—Progress of work since 1930 (pp. 337–8); Trusteeship Agreements (New Guinea) (pp. 354–5) and Nauru (pp. 366–7).
Chapter XI. Trade.—Reciprocal Tariffs, Trade Agreements, International Trade Discussions and Tariff Negotiations (pp. 377–82); Export Control (pp. 383–4); Trade Commissioner Service (pp. 395–6).
Chapter XII. Labour, Wages and Prices.—Commonwealth Employment Service (p. 496).
Chapter XIII. Local Government.—Roads—Summary according to Composition (pp. 536–7), Summary of Expenditure by Central Road Authorities (pp. 537–8).
Chapter XIV. Private Finance.—Banking Act 1947 (pp. 566–7); Additional and Reconstructed Tables on Business of Cheque-paying Banks (pp. 573–82).

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Chapter XV. Public Finance.—New Tables on Loan Raisings in Australia and Overseas (pp. 642–4); Taxes on Income—Income Year 1947–48 (pp. 690–5) and Income Year 1948–49 (pp. 1277–80).

Chapter XVI. Population.—Preliminary Results of 1947 Census for Population and Dwellings, and Revised Population Estimates for the Intercensal Period 1933–1947 (pp. 699 *et seq.*, and 1281).

Chapter XVII. Vital Statistics.—Marriages, Births and Deaths—For Earlier Periods statistics for single years replaced by annual averages for five yearly or ten-yearly periods (pp. 742 *et seq.*).

Chapter XVIII. Mineral Industry.—Government Aid to Mining (pp. 849–52)

Chapter XIX. Pastoral Production.—Classification of Sheep according to Age, Sex and Breed (p. 867); Average Weight of Sheep and Lamb Fleeces Shorn (p. 873); World Production of Wool by Type of Wool and Country (pp. 873–4).

Chapter XX. Agricultural Production.—F.A.Q. Standard of Wheat (pp. 902–3); Sorghum for Grain (pp. 925–6); Wheat Industry Legislation (p. 1295).

Chapter XXI. Farmyard, Dairy and Bee Products.—Commonwealth Subsidies on Butter, Cheese, Processed Milk Products, and Whole Milk (pp. 977–9); Whole Milk Production and Utilization (p. 980); Poultry Farming (pp. 993–1000).

Chapter XXII. Forestry.—Earlier Sections (pp. 1007–13) rewritten.

Chapter XXV. Water Conservation and Irrigation.—Special Article "The Conservation and Use of Water in Australia" (pp. 1096–1141) prepared by Mr. Ulrich Ellis.

Chapter XXVI. Defence.—Department of Defence (pp. 1142–4); Naval and Air Defence (pp. 1150–5); Casualties: Australian Services 1939–45 War (pp. 1156–60).

Chapter XXVII. Repatriation.—General Benefits (pp. 1178–80).

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

Printing difficulties are still being experienced and the delay in publication of this volume, while regrettable, has been unavoidable. Compared with the previous volume, however, the figures have been advanced by two years.

Later information which has been compiled since the various Chapters were sent to press has been incorporated in the Appendix (p. 1246) which is much more comprehensive even than in the previous issue. Opportunity has been taken therein to advance as far as possible, in summarized form, the more important statistics of the foregoing chapters. In many cases information has been extended to 1948.

My thanks are tendered to the State Statisticians, who have collected and compiled the data on which a great part of the information given in the Official Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments, and to others who have kindly, and often at considerable trouble, supplied information; special mention should be made of the services of the Chief Draftsman of the Property and Survey Branch, Department of the Interior, who was responsible for the drawing of the graphs throughout this volume, and of those of Mr. Ulrich Ellis, who prepared the special article entitled "The Conservation and Use of Water in Australia" appearing in Chapter XXV.

An expression of keen appreciation is due in respect of the valuable work performed by Mr. S. H. Begley, Editor of Publications, Mr. J. M. Jones, B.A., Assistant Editor, and the other officers of the Publications Division, and of the services rendered by the officers in charge of the several sections of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising the Chapters relative to their respective sections.

ROLAND WILSON,
Commonwealth Statistician.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
Canberra, A.C.T., June, 1949.

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA.

Heading.		Years.							
		1881.	1891.	1901.	1911.	1921.	1931.	1941.	1946.
Population(a)	Males	1,247,059	1,736,617	2,004,836	2,382,232	2,799,462	3,332,577	3,598,767	3,768,255
	Females	1,059,677	1,504,368	1,820,077	2,191,554	2,711,532	3,220,029	3,544,768	3,750,991
	Persons	2,306,736	3,240,985	3,824,913	4,573,786	5,510,994	6,552,606	7,143,535	7,519,246
Births	No.	80,004	110,187	102,945	122,193	136,198	118,509	134,525	176,379
	Rate	35.26	34.47	27.16	27.21	24.95	18.16	18.92	23.62
Deaths	No.	33,327	47,430	46,330	47,869	54,076	56,560	71,176	74,661
	Rate	14.69	14.84	12.22	10.66	9.91	8.67	10.01	10.00
Marriages	No.	17,244	23,862	27,753	39,482	46,869	38,882	75,148	79,496
	Rate	7.60	7.47	7.32	8.79	8.59	5.96	10.57	10.64
		1881–82.	1891–92.	1901–02.	1911–12.	1921–22.	1931–32.	1941–42.	1946–47.
Agriculture—									
Wheat	Area '000 acs.	2,996	3,335	5,116	7,428	9,719	14,741	12,003	13,180
	Yld. '000 bus.	21,444	25,675	38,562	71,636	129,089	190,612	166,713	117,262
	Av. Yld. bus.	7.16	7.70	7.54	9.64	13.28	12.93	13.89	8.90
Oats	Area '000 acs.	195	246	461	617	733	1,085	1,460	1,728
	Yld. '000 bus.	4,796	5,726	9,790	9,562	12,147	15,195	22,302	15,566
	Av. Yld. bus.	24.62	23.27	21.22	15.50	16.56	14.00	15.27	9.01
Barley	Area '000 acs.	75,864	68,068	74,511	116,466	298,910	342,396	784,253	747,966
	Yld. '000 bus.	1,353	1,179	1,520	2,057	6,086	6,291	18,004	11,597
	Av. Yld. bus.	17.84	17.31	20.40	17.66	20.36	18.37	22.96	15.51
Maize	Area '000 acs.	165,777	284,428	294,849	340,065	305,186	269,448	301,360	259,738
	Yld. '000 bus.	5,726	9,262	7,035	8,940	7,840	7,062	7,436	5,808
	Av. Yld. bus.	34.54	32.56	23.86	26.29	25.69	26.21	24.67	22.36
Hay	Area '000 acs.	768	942	1,688	2,518	2,995	2,635	2,758	2,006
	Yld. '000 tons	767	1,067	2,025	2,868	3,902	3,167	3,575	2,357
	Av. Yld. tons	1.00	1.13	1.20	1.14	1.30	1.20	1.30	1.18
Potatoes	Area acs.	(b) 76,265	112,884	109,685	130,463	149,144	145,111	99,324	144,729
	Yld. tons	(b) 243,216	380,477	322,524	301,489	388,091	397,102	332,727	544,077
	Av. Yld. tons	(b) 3.19	3.37	2.94	2.31	2.60	2.74	3.35	3.76
Sugar-cane(c)	Area '000 acs.	19,708	45,444	86,950	101,010	128,350	241,576	254,564	226,957
	Yld. '000 tons	350	738	1,368	1,682	2,437	4,213	5,154	4,027
	Av. Yld. tons	17.74	16.23	15.73	16.65	18.99	17.44	20.25	17.74
Vineyards	Area acs.	14,560	48,882	63,677	60,602	92,414	112,961	129,739	130,312
	Wine '000 gal.	1,438	3,438	5,262	4,975	8,543	14,191	16,045	33,190
Total net value of all agricultural production.. .. £'000		(d) 15,519	(d) 16,988	(d) 23,835	(d) 23,774	(d) 81,890	49,714	62,412	(h) 97,835
Pastoral, dairying, etc.—									
Live-stock	Horses '000	1,088	1,585	1,620	2,278	2,438	1,776	1,611	1,195
	Cattle ,,	8,011	11,112	8,491	11,829	14,441	12,261	13,561	13,427
	Sheep ,,	65,093	106,421	72,040	96,886	86,119	110,619	125,189	95,723
	Pigs ,,	703	846	931	1,111	960	1,168	1,477	1,273
Wool production(e) ..	'000 lb.	319,649	634,046	539,395	798,391	723,059	1,007,456	1,167,158	976,778
Butter ,, ..	,,	(f)	(g) 42,315	(g) 103,747	(g) 212,074	(g) 267,071	391,249	375,494	321,010
Cheese ,, ..	,,	(f)	(g) 10,131	(g) 11,845	(g) 15,887	(g) 32,653	31,423	67,520	94,865
Meat(i)—									
Beef and Veal ..	tons	(f)	(f)	(f)	(f)	339,495	349,835	533,502	487,761
Mutton and Lamb ..	,,					218,381	307,277	371,726	302,586
Pork	,,					11,060	22,746	58,086	30,026
Bacon and Ham ..	,,	(f)	(g) 7,487	(g) 15,188	(g) 23,810	(g) 26,173	31,751	42,464	47,668
Total	,,	(f)	(f)	(f)	(f)	608,196	727,484	1,027,010	885,201
Total net value of—									
Pastoral production	£'000	d 29,538	(d) 39,256	(d) 36,890	(d) 72,883	(d) 119,390	43,025	85,358	(h) 130,207
Dairying ,, ..	,,						22,564	34,344	(h) 49,858
		1881.	1891.	1901.	1911.	1921.	1931.	1941.	1946.
Mineral production—									
Gold	£'000	5,194	5,282	14,018	10,552	4,019	3,564	15,991	8,873
Silver and lead ..	,,	46	3,736	2,249	3,022	1,540	1,444	6,256	8,411
Copper	,,	714	367	2,215	2,564	804	568	1,505	1,715
Tin	,,	1,146	561	448	1,210	418	216	1,001	743
Zinc	,,	..	3	4	1,415	283	513	1,590	2,698
Coal (Black and Brown)	,,	638	1,912	2,603	3,927	11,015	6,194	11,064	14,242
Total value of all mineral production	£'000	7,820	12,074	21,817	23,303	19,997	13,191	41,690	40,554
						1921–22.	1931–32.	1941–42.	1946–47.
Forestry production—									
Quantity of local timber sawn or hewn ..	'000 sup. ft.	(f)	(f)	452,181	604,794	590,495	236,707	913,675	1,050,157

(a) At 31st December. (b) Partly estimated. (c) Productive cane. (d) Gross value. (e) In terms of greasy. (f) Not available. (g) Years ended December. (h) Subject to revision. (i) Bone-in weight in terms of fresh meat; cured weight bacon and ham.

STATISTICAL SUMMARY, AUSTRALIA—*continued.*

Heading.		Years. 1881.	1891.	1901.	1911.	1921–22.	1931–32.	1941–42.	1946–47.
Factories—									
No. of factories	..	(a)	(a)	(a)	14,455	18,023	21,657	26,971	34,768
Hands employed	No.				311,710	378,540	336,658	725,342	804,929
Wages paid	£'000				27,528	68,051	55,932	180,052	237,174
Value of production	,,				51,259	121,674	110,982	316,439	410,862
Total value of output	,,				133,022	320,332	281,646	773,059	1,011,026
Shipping—									
Oversea vessels entered and cleared	No.	3,284	3,778	4,028	4,174	3,111	3,057	2,544	2,489
	'000 tons	2,549	4,726	6,542	9,985	9,081	11,596	10,768	10,406
Commerce—									
Imports, oversea	£'000 f.o.b.	26,480	34,355	38,657	61,008	93,893	51,789	173,424	209,485
,, per head	£	11/13/5	10/15/0	10/4/0	13/11/7	17/0/9	7/18/1	24/5/6	27/17/2
Exports, oversea	£'000 f.o.b.	27,528	36,043	49,696	79,482	127,847	108,404	168,977	309,004
,, per head	£	12/2/7	11/5/6	13/2/2	17/13/11	23/4/0	16/10/11	23/13/1	41/1/10
Total oversea trade	£'000 f.o.b.	54,008	70,398	88,353	140,490	221,740	160,193	342,401	518,489
,, ,, per head	£	23/16/0	22/0/6	23/6/2	31/5/6	40/4/9	24/9/0	47/18/7	68/19/0
Net Customs and Excise duties	£'000	4,809	7,441	8,657	13,515	27,565	28,525	55,551	101,616
,, ,, per head	£	2/2/5	2/6/7	2/5/8	2/19/2	5/0/1	4/7/1	7/15/6	13/10/3
Principal Oversea Exports(b)—									
Wool	'000 lb.(c)	328,369	619,260	518,018	720,365	927,834	893,044	937,376	1,432,905
	£'000 f.o.b.	13,173	19,940	15,237	26,071	47,977	32,102	58,041	126,104
Wheat	'000 bus.	5,365	9,795	20,260	55,148	96,917	127,401	22,313	12,176
	£'000 f.o.b.	1,190	1,939	2,775	9,672	25,041	19,226	4,645	6,338
Flour	'000 short tons	50	33	97	176	360	611	414	765
	£'000 f.o.b.	520	328	590	1,392	5,520	3,833	4,191	22.535
Butter	'000 lb.	1,299	4,240	34,607	101,722	127,347	201,639	130,347	133,642
	£'000 f.o.b.	39	207	1,451	4,637	7,968	10,250	8,125	12,570
Hides and skins	,,	317	874	1,251	3,227	3,137	2,316	5,982	15,423
Tallow (inedible)	,,	644	571	678	1,936	1,442	831	842	317
Meats	,,	363	461	2,611	4,303	5,542	6,370	14,094	21,130
Timber (undressed)	,,	118	38	731	1,024	1,158	433	320	891
Gold	,,	6,445	5,704	14,316	12,046	3,483	11,893	9,188	1
Silver and lead	,,	58	1,932	2,250	3,213	2,697	2,902	7,434	10,982
Copper	,,	677	418	1,619	2,346	705	472	18	(d) 543
Coal	,,	361	646	987	901	1,100	342	259	55
Government Railways—									
Length of line open	miles	3,832	9,541	12,579	16,078	23,502	26,959	27,241	27,179
Capital cost	£'000	42,741	99,764	123,224	152,195	244,353	321,072	322,152	333,993
Gross revenue	,,	3,910	8,654	11,038	17,848	38,195	37,580	66,482	66,394
Working expenses	,,	2,142	5,630	7,134	10,946	29,818	28,142	51,043	60,939
Per cent. of working expenses on gross revenue	%	54.77	65.06	64.63	61.33	78.07	74.88	76.78	91.78
Postal—									
Letters and postcards dealt with	'000	67,640	157,297	220,853	453,063	561,973	731,135	921,901	990,067
,, ,, per head	No.	29.61	49.07	58.26	100.90	102.01	111.62	129.17	123.60
Newspapers dealt with	'000	38,063	85,280	102,727	141,038	140,477	130,502	177,974	210,343
,, ,, per head	No.	16.66	26.61	27.10	31.54	25.50	21.30	24.94	27.70
Cheque-paying Banks (e)—									
Note circulation	£'000	3,979	4,417	3,399	3,718 (f)	214	197	167	158
Coin and bullion held	,,	9,108	16,713	19,781	33,471	21,627	1,949	1,533	2,544
Advances	,,	57,733	129,742	86,353	108,579	193,436	227,139	269,944	284,123
Deposits	,,	53,840	98,345	91,487	143,447	(g) 273,867	270,114	380,502	654,139
Savings Banks(h)—									
Total deposits	£'000	7,854	15,537	30,883	59,394	154,396	197,966	274,275	660.015
Av. per head of population	£	3/10/5	4/18/7	8/3/0	13/8/5	28/0/4	30/1/11	38/3/11	87/1/3
						1921.	1931.	1941.	1946.
State Schools—									
Schools	No.	4,494	6,231	7,012	8,060	9,445	10,097	9,535	8,271
Teachers	,,	9,028	12,564	14,500	16,971	26,120	33,762	32,066	32,753
Enrolment	,,	432,320	561,153	638,478	638,850	819,042	936,901	886,655	886,811
Average attendance	,,	255,143	350,773	450,246	463,799	666,498	817,262	732,116	731,058

(a) Owing to variation in classification effective comparison is impossible. (b) Australian produce, except gold which includes re-exports. Australian currency values. (c) In terms of greasy. (d) Includes copper base alloys. (e) Figures for first three years are averages for the December quarter; the remainder for the June quarter. All cheque-paying banks prior to 1931–32, nine trading banks only thereafter. (f) Decrease due to prohibition of re-issue. (g) Includes Commonwealth Savings Bank deposits. (h) First three years at 31st December; remainder 30th June.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTE.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table, the names now borne by the States serve to indicate the localities.

Year.

1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove. Formal proclamation of colony on 7th February. Branch Settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.

1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.

1790 N.S.W.—Scarcity of provisions. "Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.

1791 N.S.W.—Arrival of "Third Fleet". Territorial seal brought by Governor King.

1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.

1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.

1794 N.S.W.—Establishment of settlement at Hawkesbury River.

1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.

1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.

1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.

1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.

1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders' charts published.

1801 N.S.W.—First colonial manufacture of blankets and linen.

1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders.

1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette", first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.

1804 N.S.W.—Insurrection of convicts at Castle Hill. Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins, and at Yorktown by Colonel Paterson.

1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur. Portion of settlers from Norfolk Island transferred to Tasmania.

1806 N.S.W.—"The great flood" on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.

1807 N.S.W.—Final transfer of convicts from Norfolk Island. First shipment of merchantable wool (245 lb.) to England.

1808 N.S.W.—Deposition of Governor Bligh.

1809 N.S.W.—Free school established.

1810 N.S.W.—Post Office officially established at Sydney, Isaac Nichols first postmaster. First race meeting in Australia at Hyde Park, Sydney. Tas.—First Tasmanian newspaper printed.

1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.

1814 N.S.W.—Flinders suggested the name "Australia", instead of "New Holland". Creation of Civil Courts.

1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.

Year.

1816 N.S.W.—Sydney Hospital opened.

1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.

1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington by Captain King.

1819 N.S.W.—First Savings Bank in Australia opened at Sydney.

1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks

1821 Tas.—Establishment of penal settlement at Macquarie Harbour.

1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.

1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.

1825 N.S.W.—Extension of western boundary to 129th meridan. Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.

1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.

1827 N.S.W.—Colony became self-supporting. Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military Settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.

1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.

1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.

1830 N.S.W.—Insurrection of convicts at Bathurst. Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Trouble with natives. Black line organized to force aborigines into Tasman's Peninsula, but failed. Between 1830 and 1835, however, George Robinson, by friendly suasion, succeeded in gathering the small remnant of aborigines (203) into settlement on Flinders Island.

1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. Arrival at Sydney of first steamer, *Sophia Jane*, from England. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.

1832 N.S.W.—State Savings Bank established.

1833 N.S.W.—First School of Arts established at Sydney.

1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Bros. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.

1835 Vic.—John Batman arrived at Port Phillip; made treaty with the natives for 600,000 acres of land; claim afterwards disallowed by Imperial Government. Foundation of Melbourne.

1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

Year.	
1837	N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—Melbourne named by Governor Bourke. First overlanders from Sydney arrived at Port Phillip.
1838	N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—"Overlanding" of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
1839	N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
1840	N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
1841	N.S.W.—Gold found near Hartley by Rev. W. B. Clarke. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation. New Zealand proclaimed a separate colony.
1842	N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
1843	N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
1844	Qld.—Leichhardt's expedition to Port Essington. S.A.—Sturt's last expedition inland.
1845	N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
1846	N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia. W.A.—Foundation of New Norcia (Benedictine) Mission.
1847	N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
1848	N.S.W.—National and Denominational School Boards established. Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
1849	N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to gold-fields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignation of convicts per *Hashemy* to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
1850	N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Sydney University founded. Vic.—Gold discovered at Clunes by Hon. W. Campbell. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
1851	N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. "Black Thursday," 6th Feb., a day of intense heat. W.A.—Proclamation of Legislative Council Act.
1852	N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascended the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protested against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs
1853	Tas.—Abolition of transportation. Vic.—Melbourne University founded.

Year.

1854 Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.

1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.

1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.
Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).

1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.

1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canoona gold rush.

1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.

1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart".

1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.

1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.

1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.

1864 Qld.—First railway begun and opened. First sugar made from Queensland cane. Tas.—First successful shipment of English salmon ova.

1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.

1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.

1868 W.A.—Arrival of the *Hougomont*, last convict ship. Tas.—First sod of first railway (Launceston and Western) turned by Duke of Edinburgh.

1869 Vic.—Record gold nugget "Welcome Stranger" 2,284 oz. found near Dunolly. W.A.—First telegraph line opened from Perth to Fremantle.

1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of transcontinental telegraph.

1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff. Launceston-Western Railway opened for traffic.

1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.

1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.

1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison. S.A.—University of Adelaide founded.

1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.

1876 N.S.W.—Completion of cable—Sydney (La Perouse) to Wellington (Wakapuaka). W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.

1877 W.A.—Opening of telegraphic communication with South Australia.

1878 Qld.—Restriction of Chinese immigration.
Introduction of telephone into Australia.

1879 N.S.W.—First artesian bore at Killara. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

Year.	
1880	N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne. Federal Conference at Melbourne and Sydney.
1881	N.S.W.—Further restrictions on Chinese immigration. Visit to Australia of T.R.H. Prince Albert Victor and Prince George. First Australia-wide censuses taken on same date.
1882	W.A.—Nugget of gold found between Roebourne and Cossack.
1883	N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities. Federal Conference held at Sydney. Federal Council created.
1884	Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
1885	N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
1886	Tas.—Discovery of gold and copper at Mount Lyell. First session of Federal Council met at Hobart on 26th January.
1887	W.A.—Cyclone destroyed nearly the whole pearling fleet off the Ninety-Mile Beach, 200 lives lost. Gold discovered at Southern Cross. First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
1888	N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100. Qld.—Railway communication opened between Sydney and Brisbane. Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
1889	Qld.—Direct railway communication established between Brisbane and Adelaide. W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.
1890	W.A.—Responsible Government granted. Meeting at Melbourne of Australasian Federation Conference.
1891	N.S.W.—Election to Legislative Assembly of 35 Labour members. Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison. First Federal Convention in Sydney, draft bill framed and adopted.
1892	W.A.—Discovery of gold by Messrs. Bayley and Ford at Coolgardie.
1893	N.S.W.—Departure by the *Royal Tar* of colonists for "New Australia". Financial crisis, chiefly affecting the eastern States.
1895	N.S.W—Free-trade tariff. Land and income taxes introduced. Conference of Premiers on Federation at Hobart.
1896	N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
1897–8	Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
1898	N.S.W.—First time production of wheat exceeded consumption. Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
1899	First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
1900	N.S.W.—Old-age pensions instituted. Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
1901	Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established. Old-age pensions instituted in Victoria.

Year.	
1902	Opening of pumping station at Northam (W.A.) in connexion with Gold-fields water supply. Completion of Pacific Cable (all-British). First Federal Tariff.
1903	Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.
1904	Commonwealth Conciliation and Arbitration Act.
1905	Re-introduction of assisted immigration in New South Wales.
1906	Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth. Excise Tariff Act imposed duties on agricultural machinery except when manufactured "under conditions as to the remuneration of labour which are declared . . . . to be fair and reasonable . . . . . ."
1907	First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
1908	Canberra chosen as site of Australian Capital.
1909	Imperial Defence Conference in London—Commonwealth ordered two destroyers and one first-class cruiser for fleet unit. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded.
1910	Penny Postage. Arrival of *Yarra* and *Parramatta*, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
1911	First Federal Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. Establishment of penny postage to all parts of British Empire. University of Western Australia founded.
1912	Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway (Port Augusta to Kalgoorlie).
1913	Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
1914	Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Visit of British Association for the Advancement of Science. Transfer of Norfolk Island to Commonwealth. European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.
1915	Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W. Navy Department created. Defeat of Third Fisher Government. Hughes Ministry formed. Australian and New Zealand troops landed at Gallipoli, 25th April. Evacuation, 18th–20th December. Australian warships with Grand Fleet, in Atlantic, Malaysia and elsewhere overseas during remainder of war.
1916	Purchase of steamships by the Commonwealth. Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service defeated by referendum.
1917	National Ministry formed under Rt. Hon. W. M. Hughes. Kalgoorlie-Port Augusta railway completed. Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service defeated by referendum.

Year.	
1918	Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King. Five Australian divisions in France formed into army corps, 1st January. Armistice with Germany, 11th November. Repatriation Commission created.
1919	Messrs. Hughes and Cook represented Australia at Peace Conference. Return of Australian troops. Flight England to Australia by Capt. Sir Ross Smith and Lieut. Sir Keith Smith. Peace Treaty signed at Versailles, 28th June.
1920	Visit to Australia of H.R.H. the Prince of Wales.
1921	Second Commonwealth Census. Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.
1922	First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
1923	First sod turned on the site of Federal Parliament House at Canberra.
1924	Directorate of Commonwealth Bank appointed. Australian Loan Council formed.
1925	Solar Observatory established at Canberra. Brisbane–Grafton railway joining Sydney and Brisbane by uniform gauge was commenced. Sydney Harbour Bridge commenced.
1926	Population of Australia reached 6,000,000. Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined.
1927	Transfer of Seat of Commonwealth Government from Melbourne to Canberra. New Parliament House opened by H.R.H. the Duke of York. Beam wireless established.
1928	Visit of British Economic Mission to report on the development of Australian resources. Financial agreement of Commonwealth and States: referendum carried.
1929	Commonwealth Bank empowered to mobilize gold reserve. Substantial export of gold reserves towards end of year.
1930	Wireless phone service with other countries inaugurated. Export prices fell to half 1928 level. Cessation of oversea loans. Tariff embargoes and rationing of imports. Visit of Sir Otto Niemeyer, of Bank of England, to discuss financial questions. Heavy export on gold reserves. Exchange Pool formed. Gold bonus granted. First Australian—Right Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia. Telephone trunk line service established between Adelaide and Perth linking up the whole of the mainland States by telephone.
1931	Depression continues. Exchange rate at 130 in January; 10 per cent. cut in Federal basic wage. First experimental air mail England to Australia and return. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes; substantial export of gold reserves. England departed from gold standard in September; depreciation of Australian £1 on Sterling continued. Wheat bounty granted. Commonwealth Bank assumed control of exchange rate and lowered it to 125.
1932	Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Lang Ministry dismissed in New South Wales. Emergency restrictions on imports relaxed. Legislation passed enabling note reserve to be held in sterling securities; subsequently gold was shipped to the United Kingdom. Imperial Economic Conference at Ottawa, with consequential tariff agreements.
1933	Third Commonwealth Census. World Economic Conference in London. Australia elected as a non-permanent member of Council of League of Nations. Secession Referendum carried (Western Australia). Referendum carried for reduction and limitation of number of members of Legislative Council (New South Wales). Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth.

Year.

1934 Visit of H.R.H. the Duke of Gloucester to open Victorian Centenary Celebrations. Goodwill Mission to the East—Leader Rt. Hon. J. G. Latham. Record flight from England to Australia by Messrs. Scott and Black (Centenary Air Race) in 71 hours. Inauguration of England–Australia Air Mail Service.

1935 Empire Statistical Conference at Ottawa. Japanese Goodwill Mission to Australia.

1936 Trade dispute with Japan. Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.

1937 Imperial Conference in London. Commonwealth basic wage "Prosperity" loading of 5s. per week. Report of the Royal Commission on Monetary and Banking Systems in Australia.

1938 Australian Trade Delegation to review Ottawa Agreement. New Defence Programme involving expenditure of £63,000,000 over three years; militia forces to be raised to 70,000. New Trade Treaty with Japan.

1939 Death of the Rt. Hon. J. A. Lyons, Prime Minister. National Register and Wealth Census. War declared on Germany, 3rd September, by Britain and France after invasion of Poland. Prime Minister declared Australia at war on same date. Royal Australian Navy placed at disposal of Great Britain, 2nd September.

Middle East Campaign. Advance party of Australians embarked for Middle East, 15th December.

1940 Exchange of Ministers between Australia and United States of America. Appointment of Australian Minister to Japan. Exchange of High Commissioners between Australia and Canada. Population of Australia reached 7,000,000. Naval Dock commenced at Sydney. Petrol rationing introduced.

Cruiser *Sydney* crippled Italian cruiser *Bartolomeo Colleoni.*

Middle East Campaign. First Australian convoy (6th Australian Division) sailed for Middle East, 11th January.

1941 Appointment of Japanese Minister to Australia. Prime Minister's visit to London. Establishment of Commonwealth Child Endowment Scheme. Cessation of commercial relations between Australia and Japan. Exchange of Ministers between Australia and China. United States Congress passed Lend-Lease Bill. Atlantic Charter signed by Mr. Roosevelt and Mr. Churchill. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December.

Australian destroyers in "Tobruk Ferry Run". *Sydney* lost after fight with *Steiermark.* R.A.A.F. in defence of Britain, in Middle East and at Singapore.

Middle East Campaign. Bardia, Tobruk, Derna, Benghazi, Giarabub (North Africa) captured, 5th January–21st March. British and Australians commenced withdrawal from area of El Agheila, 24th March. First engagement of Australian and German forces on Greek front, 10th April. Evacuation of Greece and Crete (April–May). Syrian Campaign, 8th June–12th July.

Malayan Campaign. Arrival of units of Eighth Australian Division in Malaya, 18th February.

1942 Darwin bombed. United States armed forces land in Australia. General Douglas MacArthur Supreme Commander of Allied Forces in South-west Pacific. Federal uniform taxation adopted. Commonwealth widows' pensions introduced. Japanese submarines sunk in Sydney Harbour. Rationing of commodities. Exchange of Ministers between Netherlands, Union of Soviet Socialist Republics and Australia. Constitutional Convention held in Canberra —Bill approved for reference to Commonwealth by States of powers to make laws in relation to post-war reconstruction.

Middle East Campaign. Ninth Australian Division launched first attack in British thrust at El Alamein (North Africa), 23rd October.

Malayan Campaign. First contact of Australian troops with Japanese, 14th January. Fall of Singapore, 15th February. R.A.N. suffered severely under almost constant Japanese air, submarine and surface attacks, while engaged in minesweeping, anti-submarine protection, patrolling and convoy escort work in Malayan waters.

Year.

1942— *contd.* *South-west Pacific Campaign.* Japanese landed at Rabaul, 23rd January; Java, 27th February; Lae, Salamaua, Finschhafen (New Guinea), 7th–10th March. R.A.A.F. at Port Moresby and Milne Bay. Australian cruisers in Coral Sea Battle (May). First contact between Australian and Japanese ground troops at Awala, 23rd July. Australians withdrew from Kokoda, 10th August. Australian cruisers lead attack on Solomon Islands (August). Japanese forced to withdraw from Milne Bay, 5th September. Australians recaptured Kokoda and Gorari, and captured Oivi, Wairopi, Gona, 2nd November–9th December.

1943 National Register of Civilians. High Commissioners appointed to India and New Zealand. Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.

South-west Pacific Campaign. Australians and Americans took Buna, 2nd January; Sananda, 22nd January. Australians counter-attacked at Wau and began drive to Salamaua, 3rd February. Australian and American paratroops, Australian artillery, engineers and pioneers took Nadzab, 5th September. Aerial movement of Australian troops into Markham Valley began 7th September. Australians captured Salamaua, Lae, Finschhafen, Dumpu, Satelberg Heights, Wareo, 11th September–8th December. Commencement in December of long series of amphibious operations in which R.A.N. ships of all types took part.

R.A.A.F. from 1943 till end of war operated on all fronts.

1944 Mutual Co-operation Agreement between Australia and New Zealand. Mutual Aid Agreement between Canada and Australia. Invasion of France by sea and air on 6th June. Pay-as-you-earn taxation operated from 1st July. Referendum on Constitution Amendment to give Commonwealth Government increased powers in post-war period defeated. First High Commissioner for India arrived in Australia.

South-West Pacific Campaign. Australians took Bogadjim, Madang, Alexishafen, 13–26th April. Australians landed on New Britain, 11th October. Australians took over from Americans in Bougainville, Solomon Islands, 23rd November, and at Aitape, New Guinea, 1st December. Danmap River, New Guinea, crossed, 17th December. Pearl Ridge, Bougainville, occupied, 30th December.

1945 H.R.H. the Duke of Gloucester sworn in as Governor-General. Captain Cook Dock opened. Cessation of hostilities in Europe, 8th May. Delegates of 50 countries sign United Nations' Charter at San Francisco. Occupation Survey taken of all civilian males aged 14 years and over. Re-establishment and Employment Act 1945 assented to 28th June. Death of Rt. Hon. John Curtin, Prime Minister of Australia. Hon. J. B. Chifley appointed Prime Minister. Cessation of hostilities against Japan, 15th August. Australian National Airlines Act 1945 assented to (16th August). Decision to standardize Australian railway gauges. Termination of Lend-Lease. General demobilization of Armed Forces commenced.

South-west Pacific Campaign. Australians occupied But airfield, near Wewak, New Guinea, 17th March. Landing on Soraken Peninsula, Bougainville, 20th March. Battle of Puriata River, Bougainville, won 30th March. Wewak, New Guinea, captured in combined amphibious landing and land assault, 11th May. Australians landed on Bonis Peninsula, northern Bougainville, 8th June. Yamil, in Torricelli Mountains, New Guinea, occupied, 11th June. *Borneo Campaign.* Australians landed at Tarakan Island, north-east Borneo, 1st May. Tarakan and oilfields and airstrip captured 6th–11th May. Landing at Brunei Bay, north-west Borneo, 10th June. Brunei town captured, 13th June. Landing at Lutong, Sarawak, north Borneo, 20th June. Oilfields at Brunei and Sarawak taken, 22nd–23rd June. Landing at Balikpapan, south-east Borneo, 1st July.

Year.

1946 Provision for establishment of Australian Shipping Board. First meeting of General Assembly of United Nations in London—Australian delegation led by Mr. N. J. O. Makin, Minister for Navy. Last meeting of War Cabinet; Council of Defence reconstituted. Arrangements between United Kingdom and Australia, New Zealand, India and South Africa to operate air trunk routes in various parts of world. Commonwealth Government's intervention in Printing Industry Employees' Union claim for 40-hour week. Cabinet decision to reconstitute Military Board and reinstitute system of pre-war military commands. An Australian observer sent to first meeting to establish International Monetary Fund and Bank. Government plans for increased immigration intake. Cessation of man-power controls over employment of male labour. Free passages to be granted to British Service personnel and dependants and assisted passages to British civilians and dependants who wish to emigrate to Australia. Rejection by Tasmanian Legislative Council of bill to grant price control to Commonwealth for three years. A.C.T.U. lodged applications with Arbitration Court on behalf of 47 unions for right to intervene in 40-hour week claim. Commonwealth Solicitor-General (Sir George Knowles) selected as first Australian High Commissioner to South Africa; Mr. W. J. Dignam first Australian Minister to Eire. Arrival of British Rocket Research Mission in Australia. Chief Justice of Queensland (Sir William Webb) appointed to seventh place on Federal High Court Bench. Australia and New Zealand agree to act as joint trustees for empire security in Pacific. Minister for Navy (Mr. N. J. O. Makin) appointed Ambassador to United States of America. Act continuing uniform taxation assented to. Prime Minister attended conference with United Kingdom and Dominion Prime Ministers in London. Commonwealth Government accepted responsibility for supply and maintenance of BCOF in Japan. Inauguration of Commonwealth Employment Service. Commonwealth proposals for free complete medical service brought before conference of State Ministers. Hearing of 40-hour week case commenced. Final settlement of United States of America—Australia lend-lease and reciprocal aid. Appointment of Commonwealth Insurance Commissioner. Commonwealth Archives Committee set up in place of War Archives Committee. War-time restriction on issue of passports lifted. United Kingdom and Dominion Wool Disposals Ltd. (Joint Organization) commenced operations. Parliamentary Proceedings Broadcasting Act assented to. Mr. Robert Butler appointed first United States of America Ambassador to Australia. Dr. H. V. Evatt (Minister for External Affairs) led Australian Delegation at Conference of Paris to consider draft treaties of peace with Italy, Rumania, Bulgaria, Hungary and Finland. Act to establish National University at Canberra assented to; also Wheat Industry Stabilization Act, Oversea Telecommunications Act and Coal Industry Act. Railway Standardization Agreement ratified by Commonwealth. Premiers' Conference decided to continue price control and control of land sales after end of National Security Regulations in December. First meeting since 1939 of Australian and New Zealand Association for Advancement of Science. Commonwealth and State agreement on housing programme to provide employment for 130,000 men over ten years. Announced that Manus Island to be available for collective defence of Great Britain, Australia and New Zealand. Construction approved of 50 Vampire jet fighters and engines. Commonwealth Trans-Australia Airlines began operations. R.A.A.F. commenced in Queensland photographic survey to cover whole of Australia in next six years. Sydney–Vancouver fortnightly air service commenced. Constitution Alteration Referendum results granted powers in regard to social services to Commonwealth—powers for marketing and employment refused. New South Wales Government approval of £33,000,000 15-year water storage project. Double taxation relief agreement between Australia and Britain signed. Basic wage enquiry, adjourned in 1940, re-opened. Interstate executive of A.C.T.U.

Year.

1946—*contd.* applied to Arbitration Court for increase of £1 in basic wage. Announcement that experimental rocket range to be established. Reciprocal air transport agreement between Australia and United States of America signed. Construction commenced on new Burrendong Dam on Macquarie River (N.S.W.). South Australia ratified Railway Standardization Agreement. Bill to abolish Legislative Council of New South Wales rejected on casting vote of President of Council. Interim basic wage rise of 7s. in all capital cities (except Hobart, 6s.). Relaxation of wage pegging regulations. Defence (Transitional Provisions) Act extending for twelve months certain National Security regulations assented to. Expiry of National Security Act.

1947 Arrival of first Danish Minister to Australia. Stock exchange business conducted on free market again. Appointment of first Australian Commissioner to Ceylon. Mr. W. J. McKell, Premier of New South Wales, appointed Governor-General of Australia. Aviation experts from twelve nations at conference of Provisional International Civil Aviation Organization in Melbourne. Constitution of South Pacific Commission as permanent body to assist in advancing economic and social welfare of native people in South Pacific. End of demobilization of Australian fighting forces. Approval of £9,600,000 Eildon Weir enlargement project. Industrial Arbitration (Forty Hours Week) Amendment Act assented to in New South Wales. International Monetary Agreement Act assented to. Sixteen persons killed and 35 injured in Australia's worst train accident for 21 years (Camp Mountain, Queensland). Arrival of Norway's first Minister to Australia. Validity of Banking Act 1945 challenged by Melbourne City Council. Commencement of work on £11,000,000 programme at Kingsford Smith aerodrome, Sydney. Expenditure of £250,000,000 on defence in next five years approved. Talks in Canberra between Australian and United States Governments on Pacific strategy and future defence planning. Grant of £A.25,000,000 to United Kingdom. Northern Territory Administration Act provided for establishment of a Legislative Council. Parliamentary Allowances Act increased salaries of Federal Members from £1,000 to £1,500. Additional immigration offices to be opened overseas. Census of Australia—first since 1933. Arrival of Viscount Montgomery, Chief of Imperial General Staff, to discuss aspects of defence. Sugar rationing abolished. Purchase by Commonwealth Government of remaining shares in Qantas Empire Airways Ltd. Australia to take 4,000 displaced persons as migrants this year, and 12,000 each following year if shipping supplied. Issue of new silver coins with reduced silver content (50 per cent.). Approval for £4,000,000 scheme in Western Australia for supply of water to Great Southern and North-Eastern Wheat Belts. Full High Court declared invalid Section 48 of Banking Act 1945, requiring the municipal councils to transfer their accounts from private banks to the Commonwealth Bank. Resumption of private trading with Japan authorized. Announcement of heavy reduction of all imports from dollar areas and severe restrictions on dollar advances to travellers. Empire conference on Japanese peace settlement at Canberra. Arbitration Court judgment on 40-hour week case reduced standard weekly hours of work in industry from 44 to 40 from 1st January, 1948. Air Arm of R.A.N. to be established. Commonwealth wage-pegging ceased; authority to adjust wages restored to industrial authorities. Australia to be asked to launch great food-growing scheme to help Britain, providing for long-term contracts for the supply of certain foodstuffs. General Agreement on Tariffs and Trade reached at Geneva tabled in Parliament. Draft charter for proposed International Trade Organization submitted to World Trade Conference at Havana. Banking Act to nationalize trading banks assented to—States of Victoria, South Australia and Western Australia and trading banks apply to High Court to prevent Federal Government acquiring monopoly of banking business. First party of Australian National Antarctic Research Expedition left for Heard Island to establish scientific research station. Constitution Alteration (Rents and Prices) Bill

Year.

1947—*contd.* passed. First "displaced persons"—839 Baltic migrants—reached Australia. Agreement signed to develop Blair Athol (Qld.) coal-fields through expenditure of £18,000,000 British capital. Act approving Australia becoming member of World Health Organization assented to; also Defence (Transitional Provisions) Act continuing major economic controls.

1948 Forty-hour week effective throughout Australia. BCOF to be controlled and administered by Commonwealth Government. Tram and tramway bus strike in Melbourne. Victorian Essential Services Act to protect community against interruption or dislocation of essential services. Nineteen thousand railwaymen involved in strike in Queensland. Death of Sir Isaac Isaacs, former Chief Justice of High Court and first Australian-born Governor-General of Australia. Status of Australian representatives in France, U.S.S.R. and China to be raised from Minister to Ambassador. Commencement of major water conservation works in Victoria—part of £25,000,000 plan for "drought-proofing" Victoria. R.A.A.F. Reserve, composed of a Permanent and Citizen Air Force Reserve, to be established. State of emergency declared in connexion with Queensland rail strike; Industrial Law Amendment Act granted police extraordinary powers in regard to "picketing"—subsequently repealed. Professor D. B. Copland appointed Vice-Chancellor of Australian National University. Second party of Australian National Antarctic Research Expedition left Hobart for Macquarie Island. Commonwealth Government £40,000,000 plan to eradicate tuberculosis announced. Appointments of first Soviet Ambassador to Australia and first Australian Ambassador to Russia. Scheme for £8,000,000 housing project to meet industrial expansion in Wollongong–Port Kembla district. Appointment of first Chinese Ambassador to Australia. Representation Act increasing membership of Commonwealth Parliament from 36 to 60 in Senate and 74 to 121 in Representatives assented to. First meeting of South Pacific Commission. Constitution Alteration (Rents and Prices) Referendum resulted in majorities in all States against proposal to transfer control to Commonwealth. Commonwealth pharmaceutical benefits scheme commenced. Australian Iron and Steel Ltd. ten-year plan to spend £20,000,000 on new tinplate mill and blast furnaces and other extensions at Port Kembla works. Cessation of meat and clothes rationing. Prime Minister left for London to discuss Empire trade and other problems. Bank nationalization case resulted in judgment declaring invalid certain vital sections of Banking Act 1947. Control of rents and prices passed from Commonwealth to States. Federal Cabinet approval to spend £5,179,000 for modernization of Australian airways system. Dr. H. V. Evatt elected General President of United Nations General Assembly. Federal control over shipping freights and passenger fares relinquished. Professor Marcus L. Oliphant, F.R.S. accepted appointment as Director of Post-Graduate Research School of Physical Science at Australian National University. Commonwealth Government granted leave to appeal to Privy Council against judgment of High Court in Banking Case. Essential Services Act proclaimed in Victoria (*see* above). Proposed visit of Their Majesties The King and Queen and The Princess Margaret early in 1949 indefinitely postponed owing to illness of King. Tuberculosis Act assented to. Opening session of Economic Commission for Asia and Far East at Lapstone (N.S.W.). First display of new Australian-made car, the "Holden". Australian Capital Territory Representation Act assented to. Australian Broadcasting Act to establish commission of three to control broadcasting in Australia assented to. Bill to establish an Australian Shipping Board introduced in Senate. New Federal electoral boundaries approved by Parliament. International Trade Organization Act assented to. Nationality and Citizenship Act to confer on Australians the status of Australian citizens in addition to that of British subjects assented to. Defence (Transitional Provisions) Act, Parliamentary Retiring Allowances Act (to provide for pension of £8 per week), and National Health Service Act assented to.

OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA, 1946 AND 1947.

CHAPTER I.

DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

§ 1. Early Knowledge and Discovery of Australia.

1. **Introduction.**—Only a brief summary of the more important facts relating to the early history of Australian discovery is given in this Chapter. A more complete account of this subject, together with bibliographical references thereto, may be found in Official Year Book No. 1 (pp. 45–51), although this account must be modified somewhat in view of later investigations.

2. **Early Tradition.**—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India. Rumours to that effect in the course of time found their way to Europe, and were probably spread by travellers from Indian seas, more especially by the Greek soldiers who accompanied Alexander the Great [356–323 B.C.] to India. References to this *Terra Australis* are found in the works of Ælianus [A.D. 205–234], Manilius [probably a contemporary of Augustus or Tiberius Cæsar], and Ptolemy [A.D. 107–161]. In some of the maps of the first period of the Middle Ages there is evidence which might warrant the supposition of the knowledge of the existence of a *Terra Australis*, while some idea of the Austral land appears in the maps and manuscripts of the fourteenth and fifteenth centuries. But much of the map-drawing in these early days was more or less fanciful, and there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

3. **Discovery of Australia.**—(i) *General.* The Venetian traveller Marco Polo [1254–1324] refers to a land called Locac, which through a misunderstanding of his meaning was long thought to be Australia. But Marco Polo knew nothing of any land to the south of Java, and in any case the description given of the so-called Locac could not possibly be applied to Australia, as the writer speaks of elephants, etc. On a Mappamundi in the British Museum, of not later date than 1489, there is a coast-line which has been considered to represent the west coast of Australia. Investigation by Wood and others proves this claim to be merely fanciful. Martin Behaim's globe, the oldest known globe extant, constructed in 1492, also shows what purports to be a part of Australia's coast-line, and a globe discovered in Paris bears an inscription to the effect that the *Terra Australis* was discovered in 1499. These also have other countries located in impossible positions. The term *Terra Australis* was, however, also applied to the region now known as Tierra del Fuego, hence little weight can be attached to this reference.

In the Dauphin map [about 1530–1536] Java la Grande has been supposed by some to represent Australia, but an inspection of the unreal animals and other figures thereon lends no weight to the idea. As a matter of fact much of this map drawing was simply an attempt to support the old notion that the land surface of the southern hemisphere must balance that of the northern.

(ii) *Arab Expeditions* It has been stated that the Arabs had come to Australia long before the Portuguese, the Spaniards or the Dutch, but there is no evidence to support the statement.

(iii) *Spanish and Portuguese Expeditions.* The last decade of the fifteenth century and the commencement of the sixteenth saw numerous expeditions equipped in the ports of Spain and Portugal for the purpose of exploiting the new world. The Portuguese rounded the Cape of Good Hope in 1487 and eleven years later pushed eastward to India. The Spaniards, relying on the scientific conclusion that the world was spherical, attempted to get to the East by deliberately starting out west, Magalhaens by so doing reaching the Philippine Islands in 1521.

In 1606 Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought that he had discovered the great land of the south, and therefore named the group *La Australia del Espiritu Santo.* After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian Continent, but no mention is made of this fact in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(iv) *Discoveries by the Dutch.* With the decline of Portuguese and Spanish naval supremacy came the opportunity of the Dutch for discovery. Cornelius Wytfliet's map, of which there was an English edition, published in Louvain in 1597, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria. The following oft-quoted passage occurs in Wytfliet's *Descriptionis Ptolemaicae Augmentum:* "The *Australis Terra* is the most southern of all lands. It is separated from New Guinea by a narrow strait. Its shores are hitherto but little known, since after one voyage and another, that route has been deserted and seldom is the country visited, unless when sailors are driven there by storms. The *Australis Terra* begins at one or two degrees from the equator, and is maintained by some to be so great in extent that, if it were thoroughly explored, it would be regarded as a fifth part of the world." According to Wood this passage has its origin in the voyages through the straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam to explore the islands of New Guinea. During March, 1606 the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again). Dirck Hartogs (on the plate in the Amsterdam Museum recording his voyage the name is written Dirck Hatichs), in the *Eendracht* in 1616, sailed along a considerable part of the west coast of the continent. It may be mentioned that the route was not definitely selected, but that the navigator simply went farther east than the usual course from the Cape to Java.

In 1618 the *Zeewolf* found land in latitude 20° 15′ south, and in the following year Frederik Houtman discovered the reef of the west coast, now known as *Houtman's Abrolhos.*

In 1622 the Dutch vessel *Leeuwin* rounded the Cape, which now bears that name, at the south-west of the continent, and in 1623 the Dutch vessels *Pera* and *Arnhem* discovered Arnhem Land, the peninsula on the western side of the Gulf of Carpentaria, which was so named in compliment to Peter Carpentier, Governor of the Dutch East India Company.

In 1627, Francis Thysz, Commander of the *Gulde Zeepaerd*, with Pieter Nuyts, of the Dutch Council of Seventeen, on board, coasted along a portion of the shore of the Great Australian Bight. In 1628, De Witt, Commander of the *Vianen*, discovered land on the north-west, namely, in about latitude 21° S. The *Batavia*, commanded by Francis Pelsart, was wrecked on the western coast of Australia in 1629. Pelsart was the first to carry to Europe an authentic account of the west coast of Australia, which, however, he described in the most unfavourable terms. The yachts *Amsterdam* and *Wesel*, under Gerrit Pool, visited the Gulf of Carpentaria in 1636.

Abel Janszoon Tasman, in command of two vessels, the *Heemskerck* and *Zeehan*, set out from Batavia in 1642 to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the tropic of Capricorn.

William de Vlamingh landed at the mouth of the Swan River at the end of 1696 and an exploring squadron under Martin Van Delft explored and named part of the north-west coast in 1705, but the period of Dutch discoveries may be said to have ended with Tasman's second voyage, and, with the decline of her maritime power, the Dutch interest in Australian discovery disappeared.

4. **Discoveries by the English.**—In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnet*, a trading vessel whose crew had turned buccaneers. In describing the country, Dampier stated that he was certain that it joined neither Asia, Africa nor America. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

It was a question at the end of the seventeenth century whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burden, carrying about 85 persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on 7th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772, Cook was put in command of the ships *Resolution* and *Adventure*, with a view to ascertaining whether a great southern continent existed, and having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. **Annexation of Eastern Part of Australia, 1770.**—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770, that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from latitude 38° to this place, latitude 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty only over what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip's Commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet."

A full historical account of the period referred to may be found in the *Historical Records of New South Wales* Vol. 1., parts 1 and 2.

2. **Original Extent of New South Wales.**—The Commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769, Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770, also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February, the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

3. **Extension of New South Wales Westward, 1825.**—On 17th February, 1824, Earl Bathurst advised Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20th September, 1824, of the coast from the 135th to the 129th degree of east longitude. On 16th July, 1825, the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. **Annexation of Western Australia, 1827.**—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George III. Sound, sailed from Sydney on 9th November, 1826, landed at the Sound on 26th December following, and hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George's Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June, 1829. On the 2nd of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River,

again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

§ 3. The Creation of the Several Colonies.

1. **New South Wales.**—In Governor Phillip's commission of 1786, the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Strait, Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

2. **Tasmania.**—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles.

3. **Western Australia.**—The territory westward of the 129th meridian comprising 975,920 square miles was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, though until 1831 the settlement on King George's Sound remained under the latter jurisdiction.

4. **South Australia.**—On 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory comprising 523,620 square miles was, by letters patent, brought under the jurisdiction of South Australia, which therefore controlled an area of 903,690 square miles.

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.

6. **Victoria.**—In 1851, what was known as the "Port Phillip District" of New South Wales, was constituted the colony of Victoria, "bounded on the north and northwest by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.

7. **Queensland.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland, by letters patent dated 6th June, 1859, although separation from New South Wales was not consummated until 10th

December, of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8′ south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition the area of Queensland became 670,500 square miles.

§ 4. Establishment of the Commonwealth of Australia.

1. **General.**—On 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown below :—

THE COMMONWEALTH OF AUSTRALIA : AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(*a*)	1786	310,372	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500			
South Australia ..	1834	380,070	Area of the Commonwealth ..	..	2,974,581
Western Australia	1829	975,920			

(*a*) Including the Australian Capital Territory embracing an area of 911 square miles, and 28 square miles at Jervis Bay. See par. 3 below.

2. **Transfer of the Northern Territory to the Commonwealth.**—On 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.

3. **Transfer of the Australian Capital Territory to the Commonwealth.**—On 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the Jervis Bay

Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this Island was a separate Crown Colony until 1st July, 1914, when it was transferred to the Commonwealth under the authority of the Norfolk Island Act 1913. The Island is situated in latitude 29° 3′ 45″ S. longitude 167° 56′ 29″ E., and comprises an area of 8,528 acres.

6. **Territory of New Guinea.**—It was agreed by the Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25′ E. The mandate was issued by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the New Guinea Act 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under Trusteeship Agreement with the United Nations' Organization, approved 13th December, 1946. For further particulars see Chapter X.—The Territories of Australia.

7. **Nauru.**—In 1919 the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in longitude 166° E., 26 miles south of the Equator, and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and a supplementary agreement of 30th May, 1923, giving the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. The administration under the mandate has operated from 17th December, 1920, and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under Trusteeship Agreement with the United Nations' Organization.

8. **Territory of Ashmore and Cartier Islands.**—By Imperial Order in Council dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the North-west Coast of Australia, were placed under the authority of the Commonwealth. The Islands were accepted by the Commonwealth in the Ashmore and Cartier Islands Acceptance Act 1933 under the name of the Territory of Ashmore and Cartier Islands and were transferred on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the 1933 Act in July, 1938 annexed the Islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.

9. **Australian Antarctic Territory.**—An Imperial Order in Council, 7th February, 1933, placed under the authority of the Commonwealth the Antarctic Territories, comprising all the islands and territory, other than Adélie Land, situated south of 60° S. latitude, and lying between 160° E. longitude and 45° E. longitude. The Territory was

accepted by the Commonwealth under the name of the Australian Antarctic Territory in the Australian Antarctic Territory Acceptance Act 1933 which came into force on 24th August, 1936, by proclamation issued by the Governor-General.

§ 5. The Exploration of Australia.

A fairly complete, though brief, account of the exploration of Australia was given in Official Year Book No. 2 (pp. 20–39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

§ 6. The Constitutions of the States and of the Commonwealth.

1. **General.**—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to No. 22.

2. **Commonwealth Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely : " An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, the Constitution Alteration (State Debts) 1928, and the Constitution Alteration (Social Services) 1946 is given *in extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31st December, 1947.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

An Act to constitute the Commonwealth of Australia. [*9th July*, 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established :

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.

2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State ; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

THE CONSTITUTION.

This Constitution is divided as follows:—

Chapter I.—The Parliament:
    Part I.—General:
    Part II.—The Senate:
    Part III.—The House of Representatives:
    Part IV.—Both Houses of the Parliament:
    Part V.—Powers of the Parliament:
Chapter II.—The Executive Government:
Chapter III.—The Judicature:
Chapter IV.—Finance and Trade:
Chapter V.—The States:
Chapter VI.—New States:
Chapter VII.—Miscellaneous:
Chapter VIII.—Alteration of the Constitution.
The Schedule.

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the Senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the Senators of the first class shall become vacant at the expiration of [the third year] *three years*,* and the places of those of the second class at the expiration of [the sixth year] *six years*,* from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before** the places are to become vacant.

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* As amended by Section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July** following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July** preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a Senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

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* As amended by Section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner :—

(i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators ;

(ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota ; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows :—

New South Wales ..	23	South Australia ..	6
Victoria	20	Tasmania	5
Queensland.. ..	8		

Provided that if Western Australia is an Original State, the numbers shall be as follows :—

New South Wales ..	26	South Australia ..	7
Victoria	23	Western Australia ..	5
Queensland.. ..	9	Tasmania	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the division in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provisions, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State ; but in the choosing of members each elector shall vote only once.*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

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* The Parliament has otherwise provided, by means of the Commonwealth Electoral Act 1918–1934 Section 39 (repealing an earlier provision made by the Commonwealth Franchise Act 1902).

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows :—

(i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen :

(ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

(i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power : or

(ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer : or

(iii) Is an undischarged bankrupt or insolvent : or

(iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth : or

(v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons :

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth :

45. If a senator or member of the House of Representatives—

(i) Becomes subject to any of the disabilities mentioned in the last preceding section : or

(ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors : or

(iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State :

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

(i) The mode in which its powers, privileges, and immunities may be exercised and upheld :

(ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

* The Parliamentary allowance was raised to £600 per annum in 1907 and to £1,000 per annum in 1920, but in the case of Ministers, the Presiding Officers of the two Houses, and the Chairmen of Committees, the allowance, in addition to the emoluments of office, was fixed at £400 per annum in 1907 and at £800 per annum in 1920. Several reductions under financial emergency legislation reduced the Parliamentary allowance to £750 per annum in 1932, but it was gradually restored to £1,000, the last reduction being removed in May, 1938. The latter Act also increased the allowance, in addition to the emoluments of office, to holders of Parliamentary Office to £1,000 per annum. In June, 1947, the Parliamentary allowance was increased to £1,500 per annum, and at the same time the additional allowance (1920) of £200 per annum to the Leader of the Opposition in the Senate and of £400 to the Leader of the Opposition in the House of Representatives were increased to £300 and £600 per annum respectively. In December, 1947, the Parliamentary Allowances Act was amended to provide for an additional allowance of £400 per annum to the Leader in the House of Representatives, other than the Leader of the Opposition, of a recognized political party, of which not less than ten members are members of the House of Representatives, and of which no member is a Minister of State.

Part V.—Powers of the Parliament.*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

(i) Trade and commerce with other countries, and among the States :
(ii) Taxation ; but so as not to discriminate between States or parts of States :
(iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth :
(iv) Borrowing money on the public credit of the Commonwealth :
(v) Postal, telegraphic, telephonic, and other like services :
(vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth :
(vii) Lighthouses, lightships, beacons and buoys :
(viii) Astronomical and meteorological observations :
(ix) Quarantine :
(x) Fisheries in Australian waters beyond territorial limits :
(xi) Census and statistics :
(xii) Currency, coinage, and legal tender :
(xiii) Banking, other than State banking ; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money :
(xiv) Insurance, other than State insurance ; also State insurance extending beyond the limits of the State concerned :
(xv) Weights and measures :
(xvi) Bills of exchange and promissory notes :
(xvii) Bankruptcy and insolvency :
(xviii) Copyrights, patents of inventions and designs, and trade marks :
(xix) Naturalization and aliens :
(xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth :
(xxi) Marriage :
(xxii) Divorce and matrimonial causes ; and in relation thereto, parental rights, and the custody and guardianship of infants :
(xxiii) Invalid and old-age pensions :
(xxiiiA) †*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances :*
(xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States :
(xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States :
(xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws :
(xxvii) Immigration and emigration :
(xxviii) The influx of criminals :
(xxix) External affairs :
(xxx) The relations of the Commonwealth with the islands of the Pacific :
(xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
(xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth :
(xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State :

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* Particulars of proposed laws which were submitted to referenda are referred to in Chapter III., General Government.

† Under Section 2 of the Constitution Alteration (Social Services) 1946, the Constitution was amended by the insertion of this paragraph.

(xxxiv) Railway construction and extension in any State with the consent of that State :

(xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State :

(xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides :

(xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law :

(xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia :

(xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

(i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes :

(ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth :

(iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provisions therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only ; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendations.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.*

66. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth :—

Posts, telegraphs, and telephones :
Naval and military defence :
Lighthouses, lightships, beacons, and buoys :
Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of His Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.†

72. The Justices of the High Court and of the other Courts created by the Parliament—

(i) Shall be appointed by the Governor-General in Council :

(ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity :

(iii) Shall receive such remuneration as the Parliament may fix ; but the remuneration shall not be diminished during their continuance in office.†

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* The Ministers of State were increased in 1915 to eight, in 1917 to nine, in 1935 to ten, in 1938 to eleven, and in 1941, as a special provision during the war, to nineteen. A sum of £1,650 was added to the annual appropriation for Ministers' salaries for each additional Minister and £800 per annum was allowed each Minister by the Parliamentary Allowances Act 1920 (increased from £400 per annum in 1907). Reductions under financial emergency legislation reached their maximum in 1932, when Ministers' salaries were reduced by 30 per cent. and their allowances as members by 25 per cent.; the reductions were gradually removed, finally in May, 1938, by the Parliamentary Salaries Adjustment Act 1938. This Act also made provision for an additional allowance of £1,500 per annum to the Prime Minister, and increased the Parliamentary allowance to Ministers from £800 to £1,000 per annum. The Ministers of State Act 1941 made provision for the salaries of Ministers, the appropriation, excluding the Prime Ministers' allowance, not to exceed £21,250. The Ministers of State Act 1935-1946 extended into peace-time the war-time special provision as to the number and salaries of Ministers, and the Ministers of State Act 1947 increased the appropriation for Ministers' salaries to £27,050. The Parliamentary Allowances Act 1947 increased the Parliamentary allowances to Ministers to £1,500 per annum.

† The Judiciary Act 1903 provided for a Chief Justice and two other Justices. Subsequent amendments to the Act increased the number of other Justices to four and six, and then reduced it to five. The Judiciary Act 1946 again increased it to six. The Judiciary Act 1903 also provided for the payment of a salary of £3,500 per annum to the Chief Justice and of £3,000 per annum to each other Justice. The Salaries (Statutory Offices) Adjustment Act 1947 increased these salaries respectively to £4,500 and £4,000 per annum.

73. The High Court shall have jurisdiction, with such exception and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

(i) Of any Justice or Justices exercising the original jurisdiction of the High Court:

(ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:

(iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits *inter se* of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits *inter se* of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

(i) Arising under any treaty:

(ii) Affecting consuls or other representatives of other countries:

(iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:

(iv) Between States, or between residents of different States, or between a State and a resident of another State:

(v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

(i) Arising under this Constitution, or involving its interpretation:

(ii) Arising under any laws made by the Parliament:

(iii) Of Admiralty and maritime jurisdiction:

(iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

(i) Defining the jurisdiction of any federal court other than the High Court:

(ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:

(iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

(i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:

(ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth :

(iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section ; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament :

(iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

(i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.

(ii) The Commonwealth shall debit to each State—

(*a*) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth ;

(*b*) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.

(iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

(i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:

(ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth: and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But

no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council:

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity:

(iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the State shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.† (i) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

(*a*) *the taking over of such debts by the Commonwealth;*

(*b*) *the management of such debts;*

(*c*) *the payment of interest and the provision and management of sinking funds in respect of such debts;*

(*d*) *the consolidation, renewal, conversion, and redemption of such debts;*

(*e*) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and*

(*f*) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(ii) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(iii) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(iv) *Any such agreement may be varied or rescinded by the parties thereto.*

(v) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(vi) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

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* Under Section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

† Under Section 2 of the Constitution Alteration (State Debts) 1928, the Constitution was amended by the insertion of this section.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

SCHEDULE.

OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

3. **The Royal Proclamation.**—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901; it reads as follows:—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, and *Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, *Tasmania*, and *Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9′ E. and 153° 39′ E., while its northern and southern limits are the parallels of latitude 10° 41′ S. and 39° 8′ S., or, including Tasmania, 43° 39′ S. On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are "Steep Point" on the west, "Cape Byron" on the east, "Cape York" on the north, "Wilson's Promontory" on the south, or, if Tasmania be included, "South-East Cape."

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30′ S. (its mean value for 1944 was 23° 26′ 47.65″), the areas within the tropical and temperate zones are approximately as follows :—

AUSTRALIA : AREAS OF TROPICAL AND TEMPERATE REGIONS.

Area.	N.S.W. (a)	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Within Tropical Zone sq. miles	..	..	359,000	..	364,000	..	426,320	1,149,320
Within Temperate Zone sq. miles	310,372	87,884	311,500	380,070	611,920	26,215	97,300	1,825,261
Total Area sq. miles	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581
Ratio of Tropical part to whole State	..	..	0.535	..	0.373	..	0.814	0.386
Ratio of Temperate part to whole State	1	1	0.465	1	0.627	1	0.186	0.614

(*a*) Includes Australian Capital Territory.

Thus the tropical part is roughly about five-thirteenths of the whole of Australia (0.386) or, of the three territories with areas within the tropical zone, about one-half (0.530).

2. **Area of Australia compared with Areas of other Countries.**—The area of Australia is almost as great as that of the United States of America, four-fifths of that of Canada, more than one-fifth of the area of the British Empire, nearly three-fourths of the whole area of Europe, and about 25 times as large as Great Britain and Ireland.

This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of certain other countries are given in the following table :—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *Circa* 1939.

Country.	Area.	Country.	Area.
Continental Divisions—	Sq. miles.	**Africa**—*continued.*	Sq. miles.
Europe	4,409,000	Italian East Africa ..	666,000
Asia	16,216,000	Angola	488,000
Africa	11,707,000	Union of South Africa ..	473,000
North and Central America and West Indies ..	8,665,000	Egypt	386,000
South America	6,937,000	Tanganyika Territory ..	374,000
Oceania, etc.	3,301,000	Nigeria and Protectorate ..	373,000
Total, excluding Arctic and Antarctic Conts.	51,235,000	South-West Africa ..	322,000
Europe—		Mozambique	298,000
U.S.S.R. (Russia) ..	2,316,000	Northern Rhodesia ..	290,000
Germany (*a*)	225,000	Bechuanaland Protectorate	275,000
France	213,000	Madagascar	229,000
Spain (inc. possessions) ..	195,000	Kenya Colony and Protectorate	225,000
Sweden	173,000	Other	1,130,000
Poland	150,000	Total	11,707,000
Finland	148,000	**North and Central America**—	
Italy (*b*)	131,000	Canada	3,695,000
Norway	125,000	United States of America ..	3,027,000
Rumania	114,000	Mexico	760,000
Yugoslavia	96,000	Alaska	586,000
United Kingdom ..	94,000	Newfoundland and Labrador	163,000
Other	429,000	Honduras	59,000
Total	4,409,000	Nicaragua	49,000
Asia—		Other	326,000
U.S.S.R. (Russia) ..	5,868,000	Total	8,665,000
China and Dependencies ..	4,287,000	**South America** —	
British India	865,000	Brazil	3,286,000
Arabia	1,004,000	Argentine Republic ..	1,078,000
Feudatory Indian States ..	716,000	Bolivia	421,000
Iran	635,000	Peru	482,000
Netherlands Indies (*c*) ..	735,000	Colombia (exc. of Panama)	440,000
Turkey	287,000	Venezuela	352,000
French Indo-China ..	286,000	Chile	287,000
Japan and Dependencies ..	262,000	Paraguay	153,000
Afghanistan	251,000	Ecuador	176,000
Burma	234,000	Other	262,000
Thailand	200,000	Total	6,937,000
Other	586,000	**Oceania, etc.**—	
Total	16,216,000	Commonwealth of Australia	2,975,000
Africa—		New Zealand and Dependencies	104,000
French West Africa ..	1,816,000	Territory of New Guinea ..	91,000
Anglo-Egyptian Sudan ..	969,000	Papua	90,000
French Equatorial Africa ..	960,000	Other	41,000
Belgian Congo	902,000	Total	3,301,000
Algeria	851,000	**British Empire**	13,354,000
Libya	680,000		

(*a*) Includes Austria (32,000 sq. miles) and Sudeten Territory (11,000 sq. miles). (*b*) Includes Albania (11,000 sq. miles). (*c*) Includes Dutch New Guinea.

The countries and areas given in the table are those obtaining before the 1939–45 War and were extracted from the *Statistical Year Book of the League of Nations.*

3. **Areas of Political Subdivisions.**—As already stated, Australia consists of six States and the Northern and Australian Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table :—

AUSTRALIA : AREA OF STATES AND TERRITORIES.

State or Territory.	Area.	Percentage on Total.
	Sq. miles.	%
New South Wales	309,433	10.40
Victoria	87,884	2.96
Queensland	670,500	22.54
South Australia..	380,070	12.78
Western Australia	975,920	32.81
Tasmania	26,215	0.88
Northern Territory	523,620	17.60
Australian Capital Territory ..	939	0.03
Total	2,974,581	100.00

4. **Coastal Configuration**—(i) *General.* There are no striking features in the configuration of the coast ; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1 an enumeration is given of the features of the coast-line of Australia (see pp. 60–68).

(ii) *Coast-line.* The lengths of coast-line, excluding minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table :—

AUSTRALIA : COAST-LINE AND AREA PER MILE THEREOF.

State.	Coast-line.	Area per Mile of Coast-line.	State.	Coast-line.	Area per Mile of Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(*a*)	700	443	South Australia ..	1,540	247
Victoria.. ..	680	129	Western Australia	4,350	224
Queensland ..	3,000	223	Continent (*b*) ..	11,310	261
Northern Territory	1,040	503	Tasmania ..	900	29

(*a*) Includes Australian Capital Territory. (*b*) Area 2,948,366 square miles.

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to more recent figures, England and Wales have only one-third of this, 25 square miles.

(iii) *Historical Significance of Coastal Names.* It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory, and in the Gulf of Carpentaria ; Captain Cook can be followed along the coasts of New South Wales and Queensland ; Flinders' track is easily recognized from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him ; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian and Tasmanian coasts.

5. **Geographical Features of Australia.**—In separate issues of earlier Official Year Books fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various issues can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this issue.

6. **Fauna, Flora, Geology and Seismology of Australia.**—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space naturally preclude their repetition in each volume. As pointed out in par. 5, however, the nature and position of these articles can be readily ascertained from the special index.

§ 2. Climate and Meteorology of Australia.*

1. **Introductory.**—In Official Year Book No. 3, pp. 79 and 80, some account is given of the history of Australian meteorology, including a reference to the development of magnetic observations. In Official Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference in 1907.

2. **Meteorological Publications.**—Reference to publications issued by the Central Meteorological Bureau appears in Official Year Book No. 22, pp. 40 and 41, and No. 34, p. 11. The following publications have since been issued :—Bulletin No. 28, " Duststorms in Australia " ; Bulletin No. 29, " Report on the Divergence Theory of the Formation of Cyclones " ; Bulletin No. 30, " Synoptic Analysis over South-West Pacific Area " ; Bulletin No. 31, " Coastal Fogs in Australia " ; Bulletin No. 32, " Frost in the Australian Region " ; Bulletin No. 33, " Discussion of Seven Years of Aerological Observations by Aeroplane at Sydney " ; Bulletin No. 34, " Bradfield Scheme for Watering the Inland " ; Bulletin No. 35, " A Study of Average Hourly Values of Temperature, Relative Humidity and Saturation Deficit in the Australian Region from Records of Capital City Bureaux " ; Bulletin No. 36, " Weather Conditions Affecting Aviation over the Tasman Sea "—Part IV., " Flying Conditions over the Tasman Sea " (1940–44) ; Bulletin No. 37, " Discussion of Four Years of Aerological Observations obtained by means of Aeroplanes near Perth " ; Studies in Applied Climatology, Western Australia—Pamphlet No. 1, " Climate of the West Australian Wheat Belt with Special Reference to Rainfall over Marginal Areas " ; " Analysis and Forecasting in the South-West Pacific Area " ; and " Set of Typical Summer and Winter Weather Charts (for use in Schools) ".

3. **Equipment.**—The determination of the climatological data has been made by records of the following instruments :—

(i) *Rainfall.* Rainfall has been measured by a cylindrical gauge generally 8 inches in diameter.

(ii) *Temperature.* Extreme daily temperatures have been recorded by means of self-registering maximum and minimum thermometers which are read and set daily.

(iii) *Humidity.* Humidities have been determined by the aid of tables from readings of dry and wet bulb thermometers.

(iv) *Atmospheric Pressure.* Pressures have been measured by mercurial barometers of the Kew (or Fortin) pattern.

(v) *Evaporation.* The standard evaporimeter in use consists of a cylindrical galvanized iron tank 3 feet in diameter and 3 feet deep, with a water jacket. Concrete tanks of similar form and dimensions are also used.

(vi) *Wind.* Data concerning wind have been obtained either by " Robinson " cup anemometer, " Dines " pressure tube anemometer or by " Machin " cup anemometer.

4. **General Description of Australia.**—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within Queensland, Western Australia and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles ; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the " temperate " region is half as large again as the " tropical " (more accurately 1.588). By reason of its insular geographical position and the absence of striking physical features whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

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* Prepared from data supplied by the Director, Commonwealth Meteorological Bureau.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

5. **Meteorological Divisions.**—(i) *General.* Reference to the divisions adopted by the Commonwealth Meteorologist will be found in Official Year Book No. 22, p. 41.

(ii) *Special Climatological Stations.* The latitudes, longitudes and altitudes of special stations, the climatological features of which are graphically represented hereinafter, are as follows :—

SPECIAL CLIMATOLOGICAL STATIONS : AUSTRALIA.

Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.		Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.	
	Feet.	deg.	min.	deg.	min.		Feet.	deg.	min.	deg.	min.
Perth ..	210	31	57	115	51	Canberra ..	1,906	35	18	149	06
Adelaide ..	140	34	56	138	35	Darwin ..	97	12	28	130	51
Brisbane ..	134	27	28	153	2	Alice Springs..	1,901	23	38	133	37
Sydney ..	138	33	52	151	12	Dubbo ..	870	32	15	148	37
Melbourne ..	114	37	49	144	58	Laverton, W.A.	1,506	28	40	122	23
Hobart ..	177	42	53	147	20	Coolgardie ..	1,389	30	57	121	10

6. **Temperatures.**—(i) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° Fahrenheit extends in South America and South Africa as far south as latitude 33°, while in Australia it reaches only as far south as latitude 30°, thus showing that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° isotherm extends in several of the western States as far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places ; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° in some localities.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8 4° maximum and minimum respectively, and the extreme readings for the year, or the highest maximum on record and the lowest minimum, show a difference of under 50°.

(ii) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade, and, considering Australia as a whole, frosts may occur within a few miles of the coastline over the entire continent except in the Northern Territory and in a considerable area of Northern Queensland. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine gold-fields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The coldest part of Australia is the extreme south-east of New South Wales and extreme east of Victoria—the region of the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons, while in winter, readings slightly below zero are occasionally recorded.

Tasmania as a whole enjoys a most moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° in the eastern part of the State.

(iii) *Monthly Maximum and Minimum Temperatures.* The normal monthly maximum and minimum temperatures can be best shown by means of graphs, which exhibit the nature of the fluctuation of each for all available years. In the diagram (page 33) for nine representative places in Australia, the upper heavy curves show the mean maximum, and the lower heavy curves the mean minimum temperatures based upon daily observations, while the length of the interval between these two heavy curves shows the average difference between the highest and the lowest temperatures of the twenty-four hours.

7. **Humidity.**—After temperature, humidity is the most important element of climate particularly as regards its effects on human comfort, rainfall supply, and conservation and related problems.

In this publication the humidity of the air has been graphically represented (page 33) by its vapour pressure (i.e., the partial pressure of the water vapour measured in inches of mercury). The humidity has also been expressed by the relative humidity which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., have been given in the tables of climatological data for the capital cities (para. 18). The mean monthly vapour pressure has also been added to these tables.

The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne. Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Canberra, Melbourne, Darwin, Hobart, Brisbane, Perth, Adelaide and Alice Springs.

8. **Evaporation.**—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia the question is, perhaps, of more than ordinary importance, since in its drier regions water has often to be conserved in " tanks "* and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (see page 41) which shows that the yearly amount varies from about 20 inches over Western Tasmania to more than 100 inches over central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, during no month of the year does the rainfall exceed the evaporation. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as its rainfall; it is noteworthy that the vegetation over most of this region is characterised by acacia, semi-desert,

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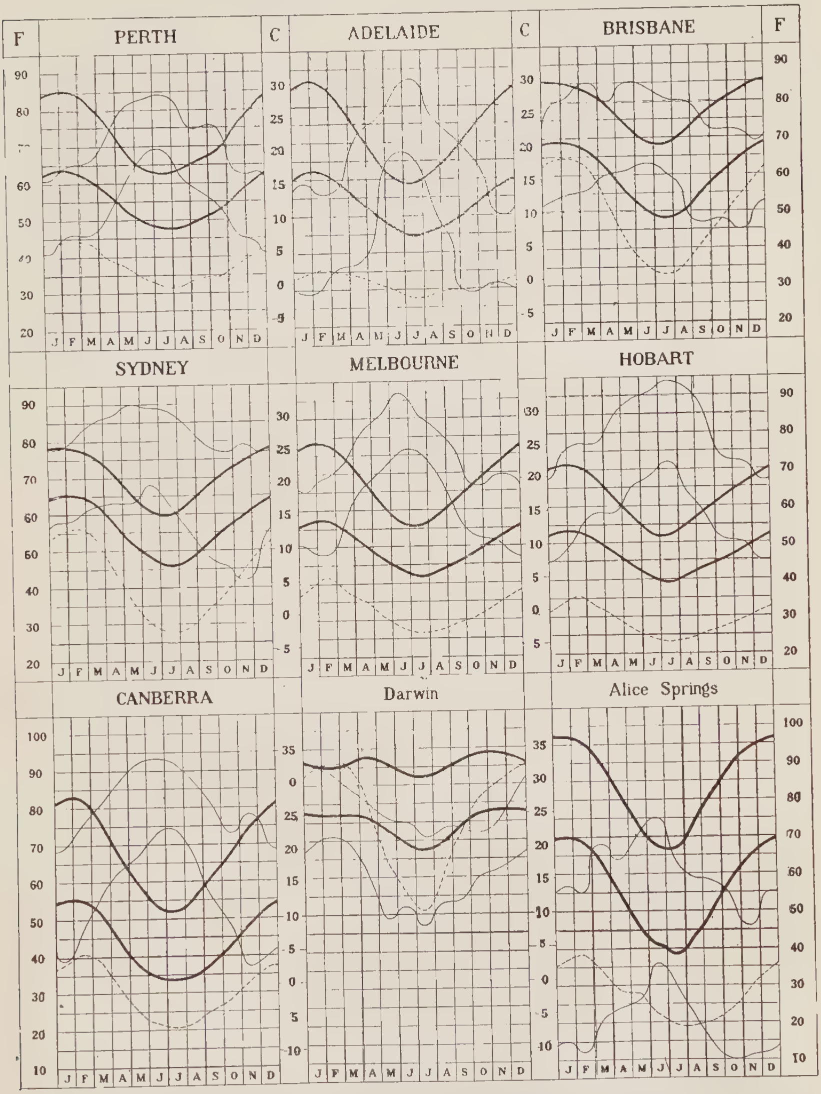
* In Australia artificial storage ponds or reservoirs are called " tanks."

AVERAGE ANNUAL FLUCTUATIONS OF NORMAL MAXIMUM AND MINIMUM TEMPERATURE AND HUMIDITY.



EXPLANATION.—The upper and lower heavy lines in each graph represent the mean maximum and mean minimum temperatures respectively. The Fahrenheit temperature scales are shown on the outer edge of the sheet under " F " and the centigrade scales in the two inner columns under " C ".

The broken line shows the normal absolute humidity in the form of 9 a.m. vapour pressures for which the figures in the outer " F " columns represent hundredths of an inch of barometric pressure.

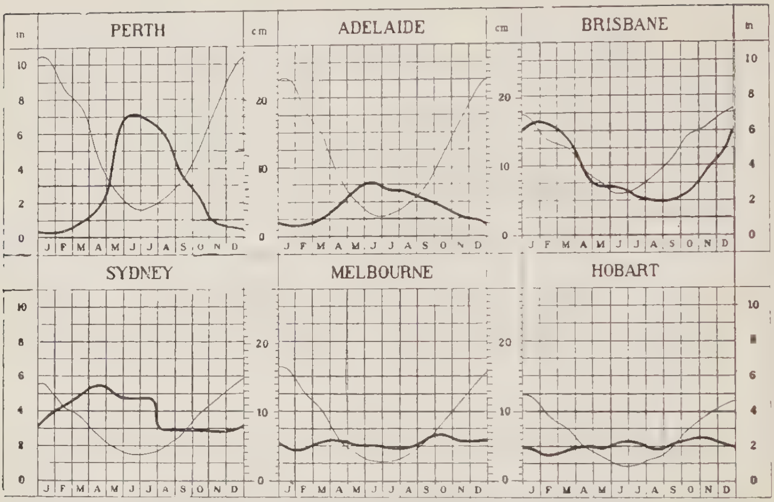
The upper and lower fine lines join the greatest and the least monthly means of relative humidity respectively, the figures under the outer columns " F " indicating percentage values.

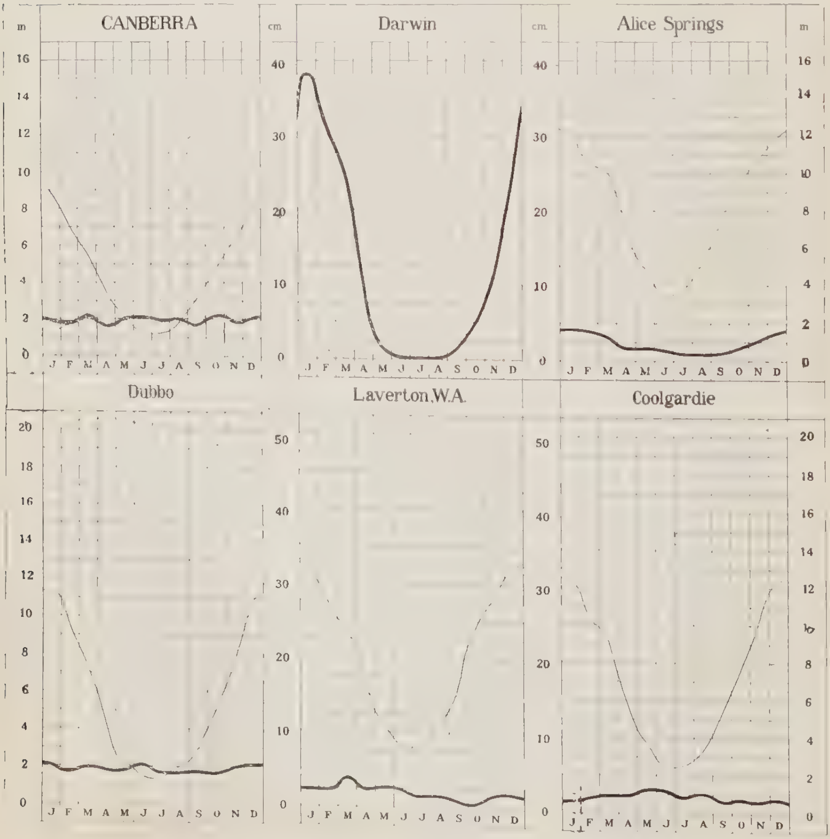
The curves for temperature and vapour pressure joining the mean monthly values serve to show the annual fluctuation of these elements, but the relative humidity graphs joining the extreme values for each month do not indicate any normal annual variation.

Comparison of the maximum and minimum temperature curves affords a measure of the mean diurnal range of temperature. At Perth in the middle of January, for instance, there is normally a range of 21° from 63° F. to 84° F., but in July it is only 15° from 48° F. to 63° F.

The relative humidity curves illustrate the extreme range of the mean monthly humidity over a number of years.

MEAN MONTHLY RAINFALL AND EVAPORATION.





EXPLANATION.—On the preceding graphs thick lines denote rainfall, and thin lines evaporation, and show the fluctuation of the mean rate of fall or evaporation *per month* throughout the year. The results, plotted from the Climatological Tables herein, are shown in inches (see the outer columns), and the corresponding metric scale (centimetres) is shown in the two inner columns. The evaporation is not given for Darwin.

At Perth, Adelaide, Brisbane, Melbourne, Hobart, Canberra, Alice Springs and Coolgardie the results have been obtained from jacketed tanks sunk in the ground. At Sydney and Dubbo sunken tanks without water jackets are used, whilst at Laverton (W.A.) the records are taken from a small portable jacket evaporation dish of 8 inches in diameter.

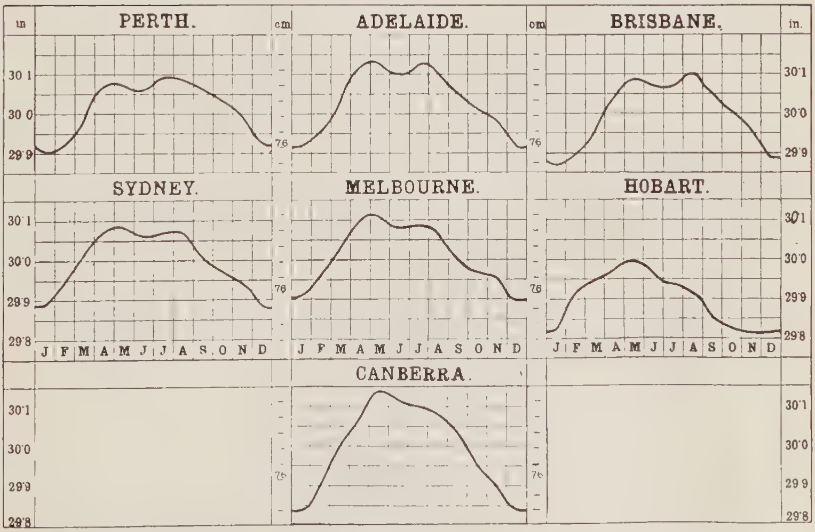
The distance for any date from the zero line to the curve represents the average number of inches, reckoned as per month, of rainfall at that date. Thus, taking the curve for Adelaide in the middle of January, the rain falls on the average at the rate of about three-fourths of an inch per month or, say at the rate of about 9 inches per year. In the middle of June it falls at the rate of a little over 3 inches per month, or, say, at the rate of about 37 inches per year. At Dubbo, the evaporation is at the rate of nearly 11¾ inches per month about the middle of January, and only about 1½ inches at the middle of June.

The mean annual rainfall and evaporation at the places indicated are given in the appended table.

MEAN ANNUAL RAINFALL AND EVAPORATION.

Place.	Rainfall.	Evaporation.	Place.	Rainfall.	Evaporation.
	In.	In.		In.	In.
Perth ..	34.95	65.91	Canberra ..	22.45	54.00
Adelaide ..	21.09	56.04	Darwin ..	60.60	..
Brisbane ..	44.58	56.36	Alice Springs ..	10.55	97.21
Sydney ..	46.35	40.17	Dubbo ..	21.83	66.37
Melbourne ..	25.54	39.15	Laverton, W.A.	9.12	95.80
Hobart ..	24.52	31.21	Coolgardie ..	10.24	84.42

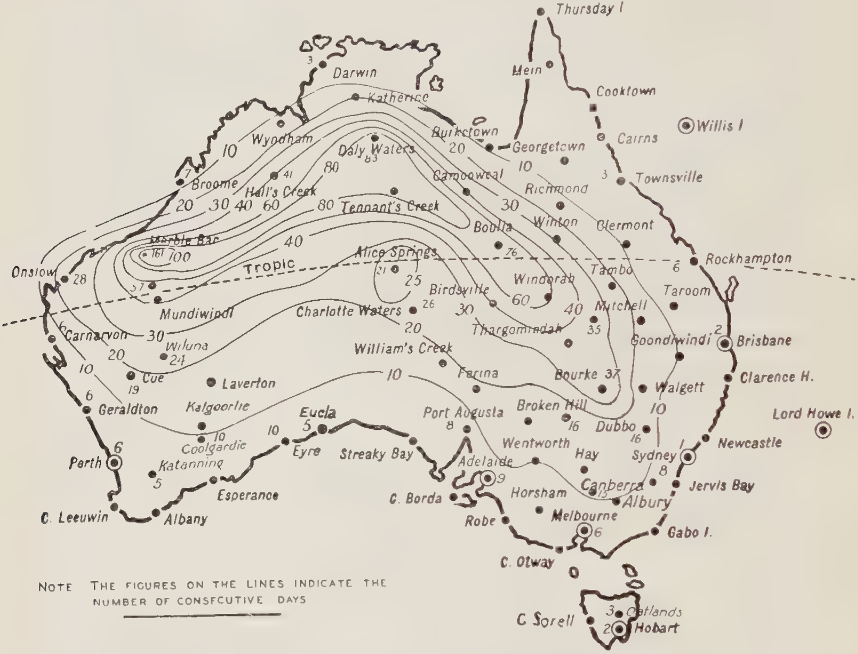
MEAN BAROMETRIC PRESSURE.—CAPITAL CITIES.



EXPLANATION.—The lines representing the yearly fluctuations of barometric pressure at the State capital cities are means for long periods, and are plotted from the Climatological Tables herein. The pressures are shown in inches on about 2½ times the natural scale, and the corresponding pressures in centimetres are also shown in the two inner columns, in which each division represents one millimetre.

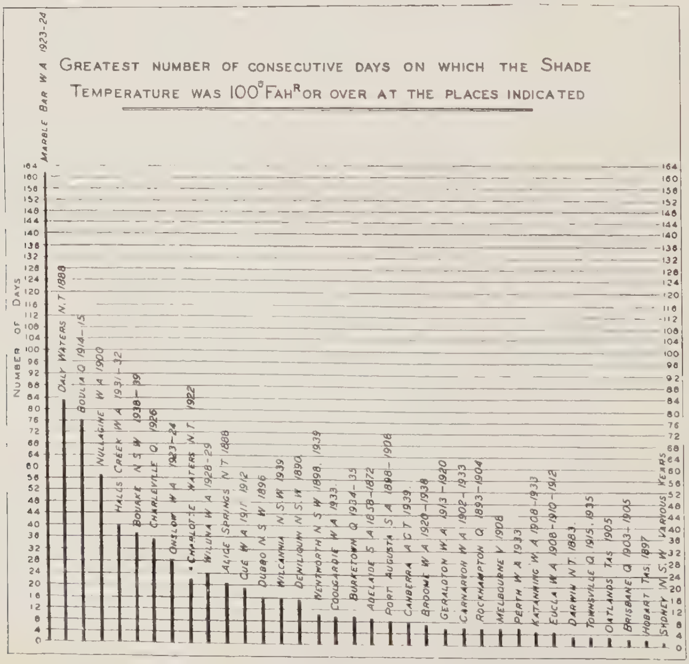
Taking the Brisbane graph for purposes of illustration, it will be seen that the mean pressure in the middle of January is about 29.87 inches, and there are maxima in the middle of May and August on about 30.09 inches.

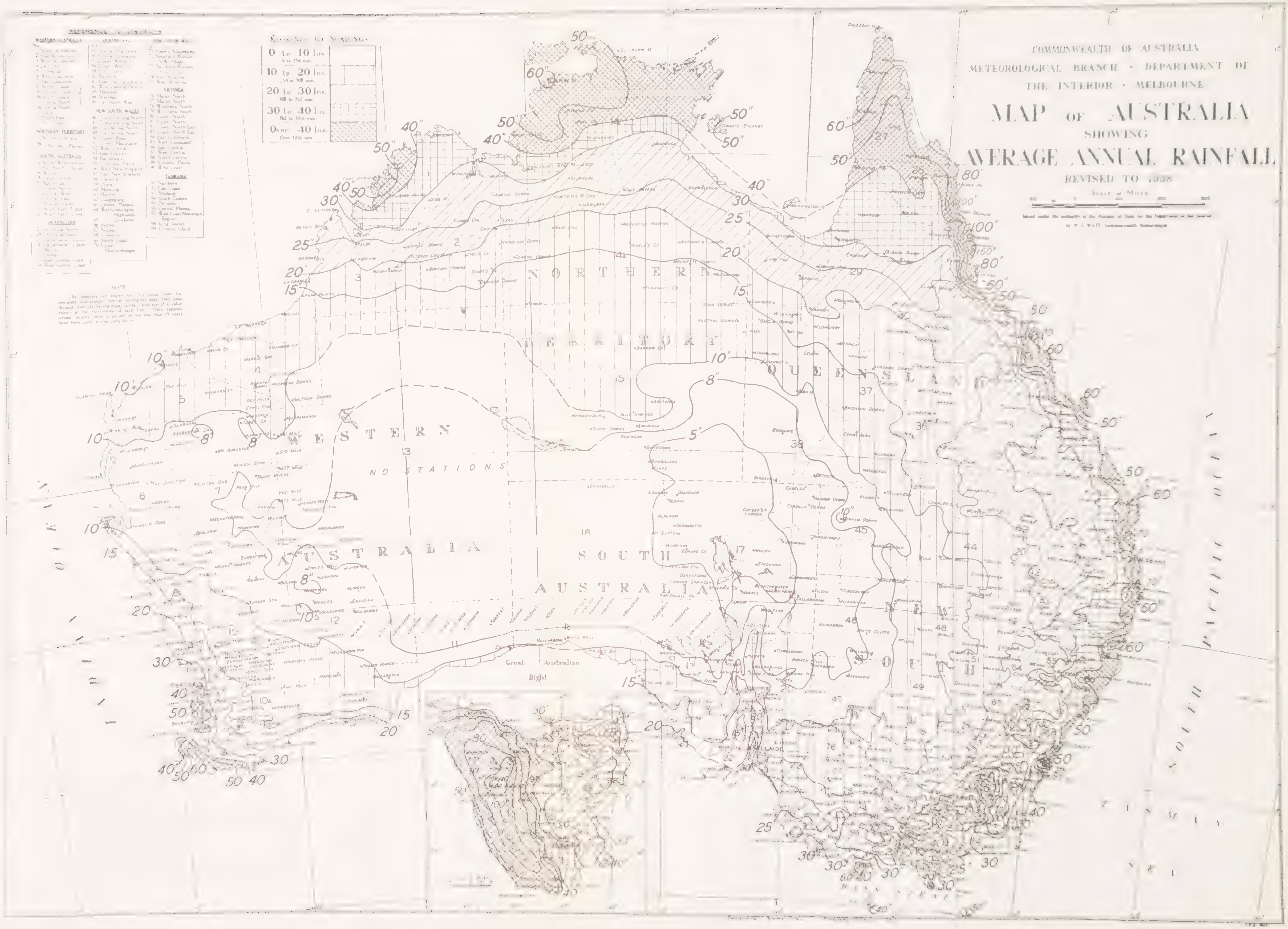
AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F

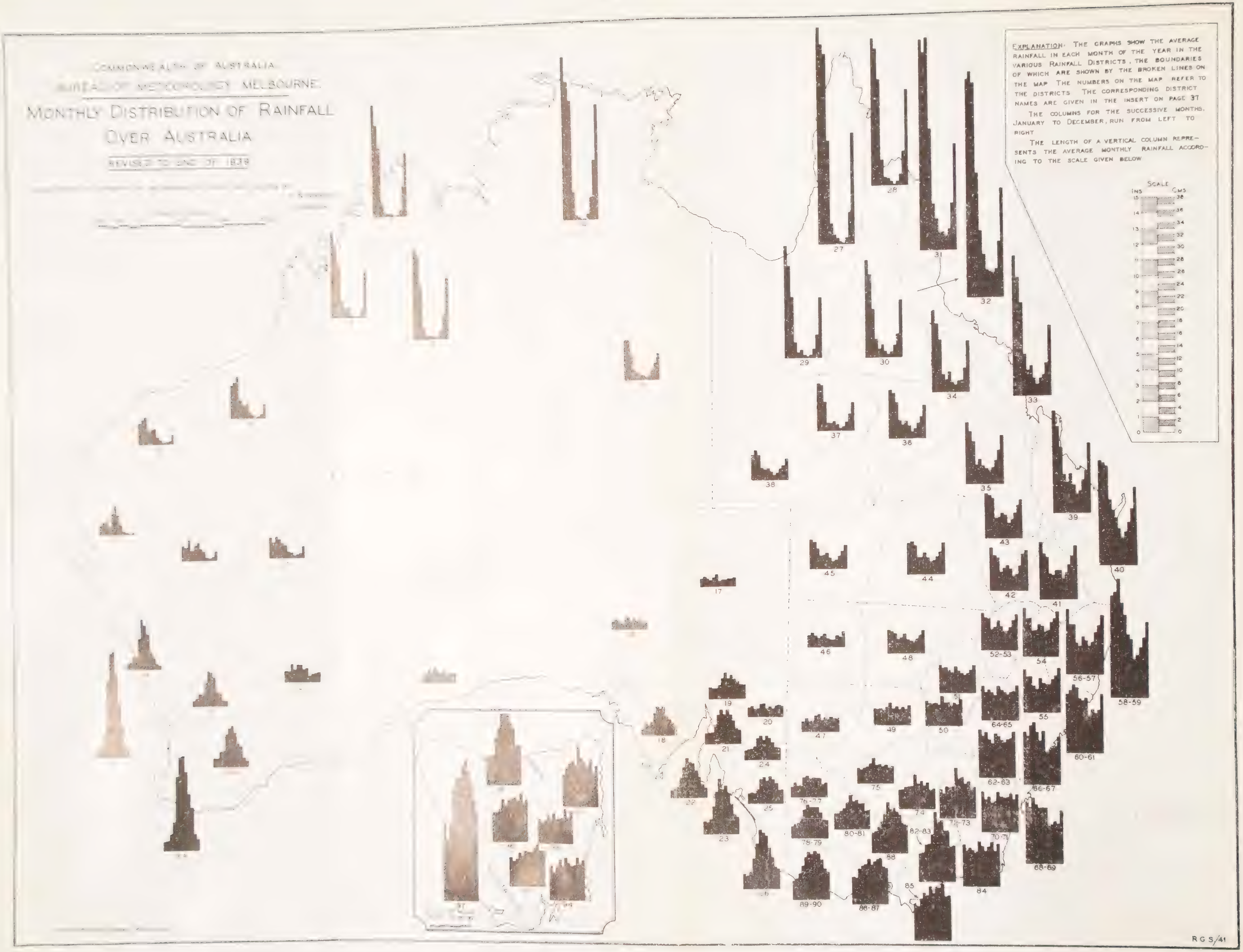

Thursday I
Mein
Cooktown
Cairns
Willis I
Darwin
Katherine
Wyndham
Daly Waters
83
Burketown
Georgetown
Townsville
Broome
Hall's Creek
41
Camooweal
Richmond
Tennant's Creek
Boulia
76
Winton
Clermont
Marble Bar
161
100
Onslow
28
Tropic
Alice Springs
21
25
Rockhampton
Windorah
Tambo
Taroom
Mundiwindi
57
Birdsville
26
Mitchell
35
Charlotte Waters
Thargomindah
Goondiwindi
Brisbane
Carnarvon
Wiluna
24
William's Creek
Clarence H.
Cue
19
Laverton
Farina
Bourke 37
Walgett
Geraldton
Kalgoorlie
Eucla
Port Augusta
Broken Hill
16
Dubbo
16
Lord Howe I.
Coolgardie
Eyre
Streaky Bay
Wentworth
Hay
Sydney
Newcastle
Perth
Katanning
Adelaide
9
Canberra
15
Jervis Bay
Esperance
C. Borda
Horsham
Albury
C. Leeuwin
Albany
Robe
Melbourne
Gabo I.
C. Otway
C Sorell
Oatlands
Hobart
3
10
20
30
40
60
80
7
6
5
2
1
8

NOTE THE FIGURES ON THE LINES INDICATE THE NUMBER OF CONSECUTIVE DAYS

DECEMBER, 1942.


GREATEST NUMBER OF CONSECUTIVE DAYS ON WHICH THE SHADE TEMPERATURE WAS 100°FAH^R OR OVER AT THE PLACES INDICATED


COMMONWEALTH OF AUSTRALIA
METEOROLOGICAL BRANCH · DEPARTMENT OF THE INTERIOR · MELBOURNE
MAP OF AUSTRALIA
SHOWING
AVERAGE ANNUAL RAINFALL
REVISED TO 1955
SCALE OF MILES
100 50 0 100 200 300
REFERENCE TO MAP NOS.
0 to 10 Ins. 0 to 254 mm.
10 to 20 Ins. 254 to 508 mm.
20 to 30 Ins. 508 to 762 mm.
30 to 40 Ins. 762 to 1016 mm.
Over 40 Ins. Over 1016 mm.
NOTE
NORTHERN TERRITORY
WESTERN AUSTRALIA
NO STATIONS
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
INDIAN OCEAN
SOUTH PACIFIC OCEAN
TASMAN SEA
Great Australian Bight
ADELAIDE
DARWIN



COMMONWEALTH OF AUSTRALIA

BUREAU OF METEOROLOGY MELBOURNE

MONTHLY DISTRIBUTION OF RAINFALL OVER AUSTRALIA

REVISED TO END OF 1939

EXPLANATION. The graphs show the average rainfall in each month of the year in the various Rainfall Districts, the boundaries of which are shown by the broken lines on the map. The numbers on the map refer to the districts. The corresponding district names are given in the insert on page 37.

The columns for the successive months, January to December, run from left to right.

The length of a vertical column represents the average monthly rainfall according to the scale given below.

SCALE
INS
CMS
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
27
28
31
32
29
30
34
33
37
38
38
35
39
40
43
45
44
42
41
17
46
48
52-53
54
56-57
58-59
19
20
47
49
50
51
64-65
55
60-61
18
21
24
62-63
66-67
22
25
76-77
75
74
72-73
70-71
23
78-79
80-81
82-83
88
68-69
26
89-90
86-87
85
84
87
94
RGS/41

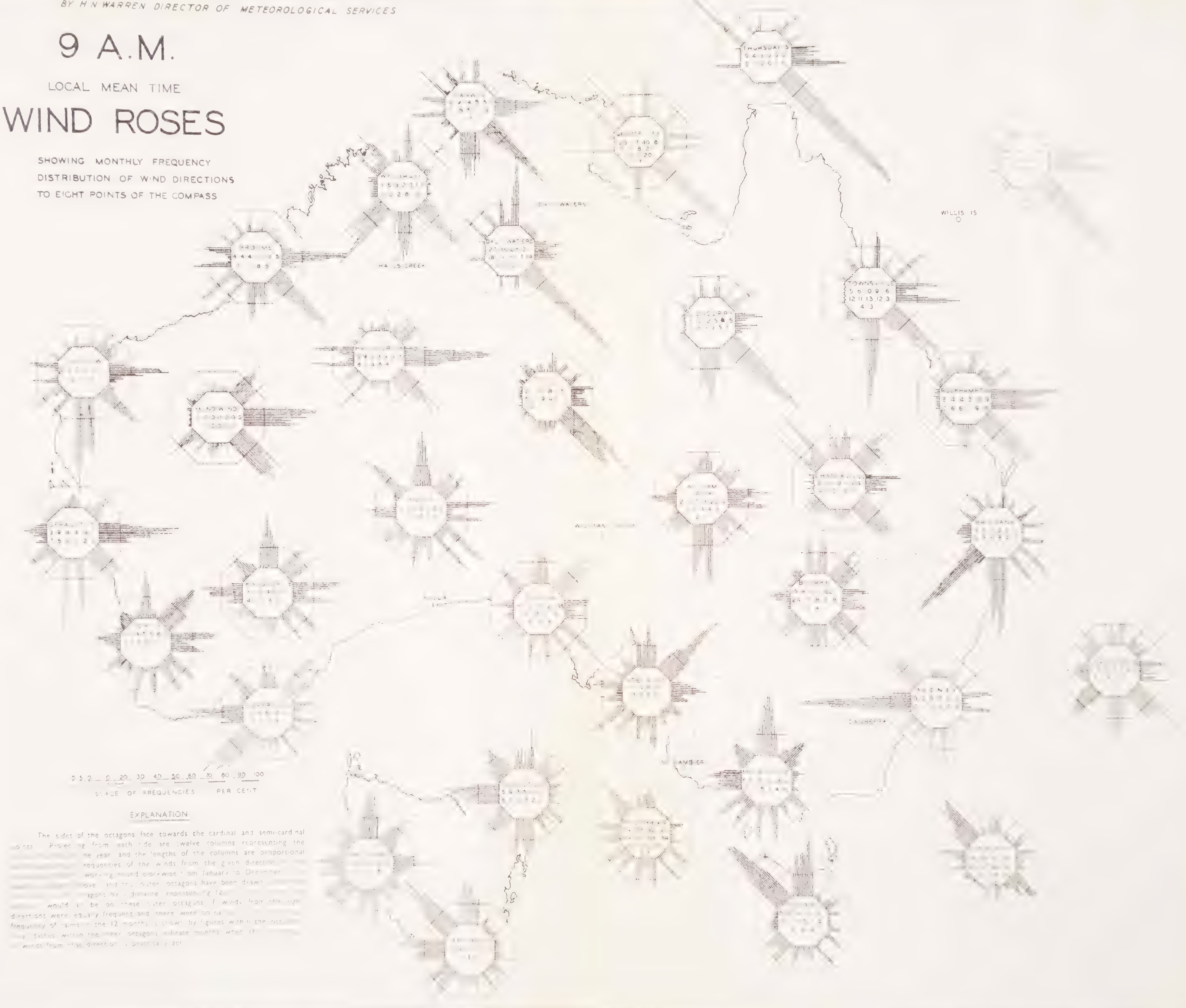
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR
BY H. N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

9 A.M.

LOCAL MEAN TIME

WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS


THURSDAY IS
DALY WATERS
HALLS CREEK
BROOME
TOWNSVILLE
ROCKHAMPTON
WILLIS IS
SYDNEY
MT GAMBIER
0 5 2 10 20 30 40 50 60 70 80 90 100
SCALE OF FREQUENCIES PER CENT

EXPLANATION

The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing the [illegible] the year and the lengths of the columns are proportional [illegible] frequencies of the winds from the given direction [illegible] working round clockwise from January to December [illegible] ove and the outer octagons have been drawn [illegible] agons by a distance representing 12 [illegible] would be on these outer octagons if winds from the eight directions were equally frequent and there were no ca[illegible] frequency of calms in the 12 months is shown by figures within the oct[illegible] [illegible] dashes within the inner octagons indicate months when th[illegible] winds from that direction is practically zer[illegible]

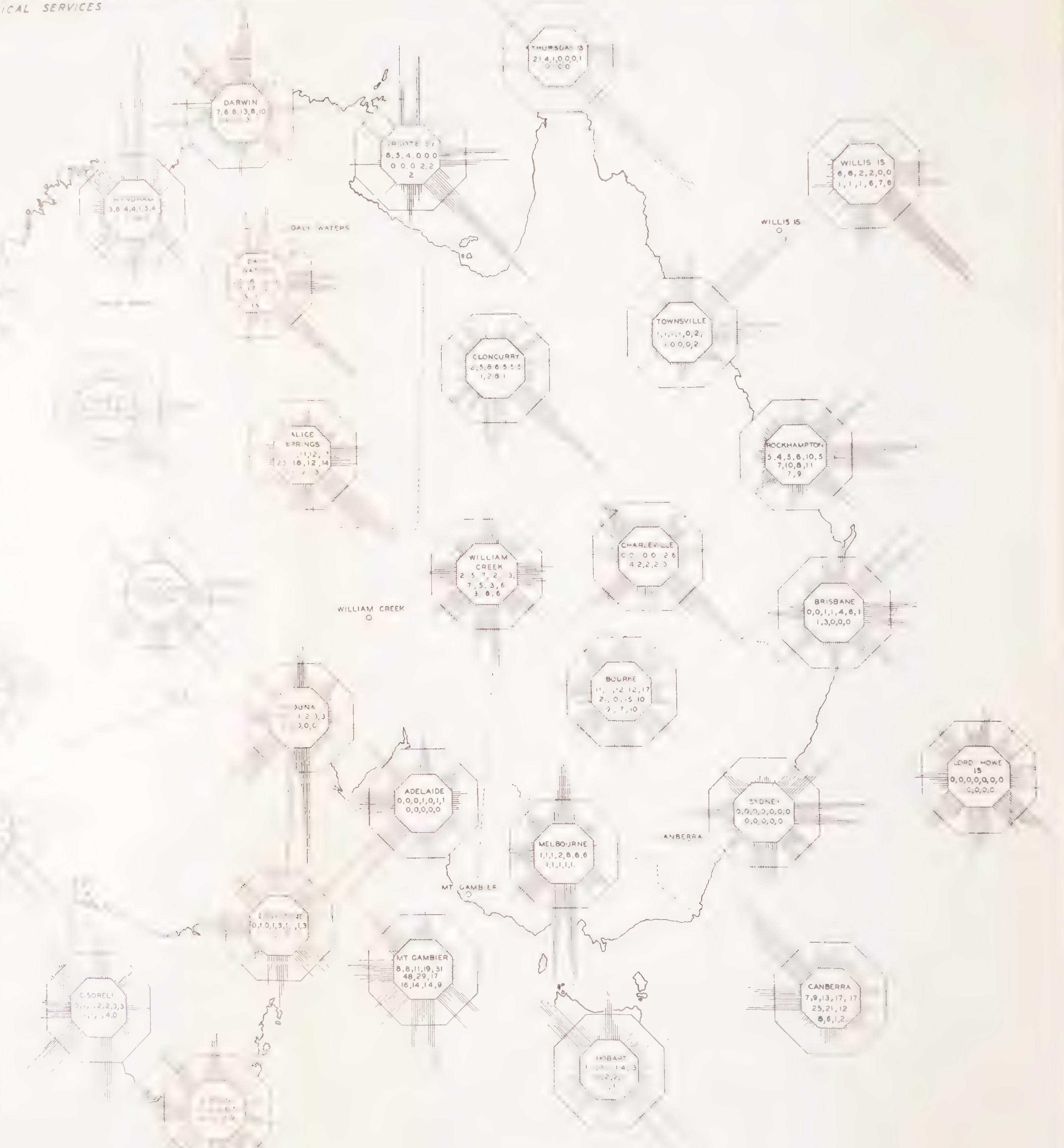
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR
BY H. N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

3 P.M.

LOCAL MEAN TIME

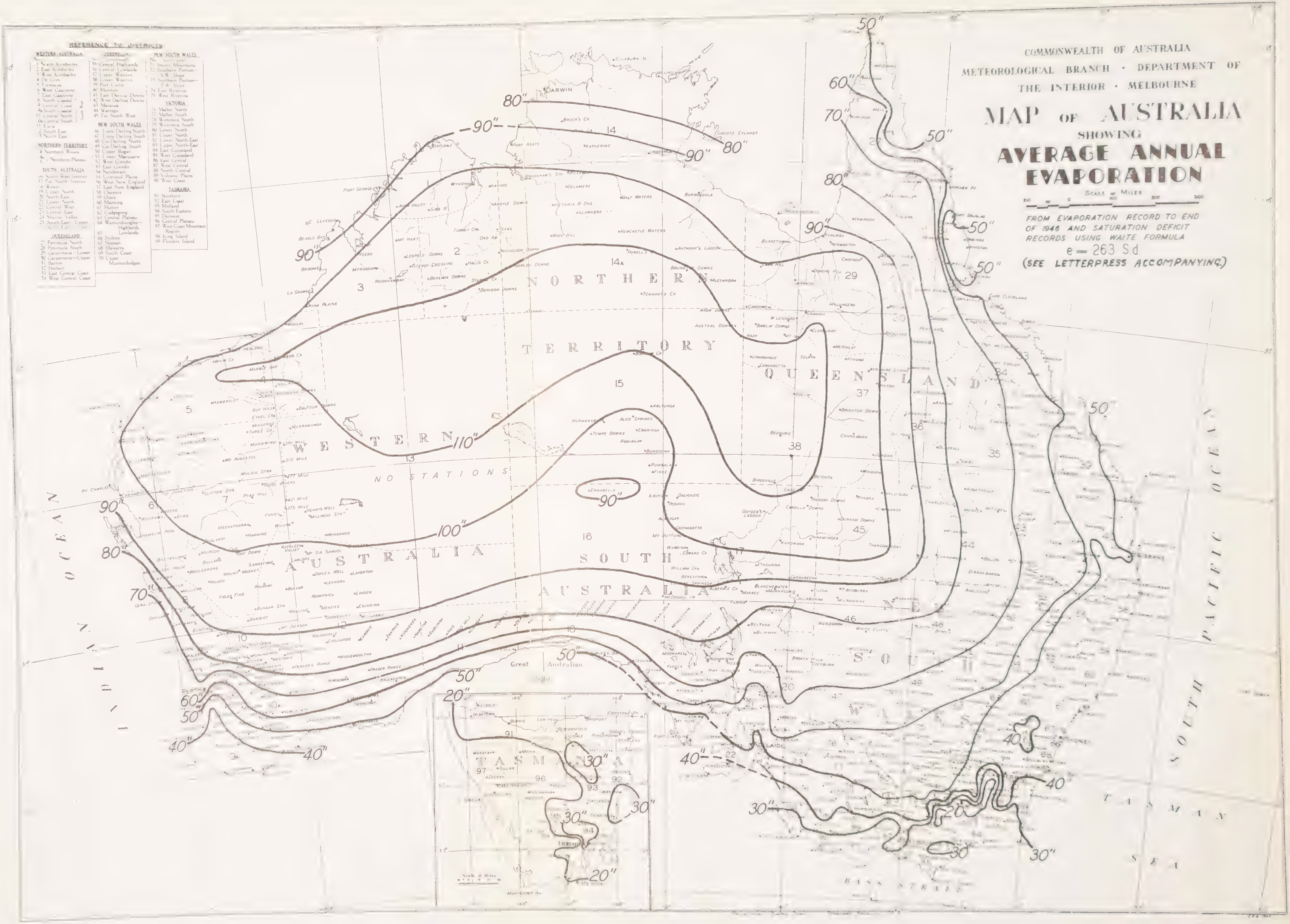
WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS


DARWIN
7,6 6,13,8,10
WYNDHAM
3,6 4,4,1,5,4
DALY WATERS
DALY WATERS
THURSDAY IS
21,4,1,0,0,0,1
0 0 0
8,5,4,0 0 0
0 0,0 2,2
2
WILLIS IS
6,6,2,2,0,0
1,1,1,6,7,6
WILLIS IS
TOWNSVILLE
1,1,1,1,0,2,
1 0 0,0,2
CLONCURRY
2,5,8 6 5 5 5
1,2 8 1
ALICE
SPRINGS
11,12, 7
23 18,12,14
3
ROCKHAMPTON
5,4,5,6,10,5
7,10,8,11
7,9
CHARLEVILLE
0 0 0 0 2 6
4 2,2,2 3
WILLIAM
CREEK
2 5 7, 2 3,
7,5,3,6
3 6,6
WILLIAM CREEK
BRISBANE
0,0,1,1,4,6,1
1,3,0,0,0
BOURKE
11, 12 12,17
2 0, 15 10
9, 7,10
1 2 3,3
0,0,0
ADELAIDE
0,0,0,1,0,1,1
0,0,0,0,0
LORD HOWE
IS
0,0,0,0,0,0,0
0,0,0,0
SYDNEY
0,0,0,0,0,0,0
0,0,0,0,0
ANBERRA
MELBOURNE
1,1,1,2,8,6,6
1,1,1,1,1.
MT GAMBIER
0,1,0,1,3,1, 1,3
MT GAMBIER
8,8,11,19,31
48,29,17
16,14,14,9
C SORELL
2,2,3,3
4,0
HOBART
14,3
2,2,
1
CANBERRA
7,9,13,17,17
25,21,12
8,6,1,2
SCALE OF FREQUENCIES

EXPLANATION

[illegible] sides of the octagons face towards the cardinal and semi-cardinal [illegible] projecting from each side are twelve columns representing the [illegible] of the year and the lengths of the columns are proportional [illegible] percentage frequencies of the winds from the given direction in the [illegible] working round clockwise from January to December. The [illegible] and the outer octagons have been drawn separated [illegible] by a distance representing 12½ [illegible] The tops of the [illegible] these outer octagons if winds from the eight [illegible] were equally frequent and there were no calms. The percentage of calms in the 12 months is shown by figures within the octagons. [illegible] octagons indicate [illegible] is practically zero.


80"
90"
100"
110"
90"
80"
70"
60"
50"
40"
30"
20"
NORTHERN TERRITORY
WESTERN AUSTRALIA
NO STATIONS
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
INDIAN OCEAN
SOUTH PACIFIC OCEAN
TASMAN SEA
BASS STRAIT
Great Australian Bight
TASMANIA
DARWIN
ALICE SPRINGS
ADELAIDE
PERTH
BRISBANE
Scale of Miles

COMMONWEALTH OF AUSTRALIA
METEOROLOGICAL BRANCH · DEPARTMENT OF
THE INTERIOR · MELBOURNE

MAP OF AUSTRALIA
SHOWING
AVERAGE ANNUAL EVAPORATION

SCALE OF MILES
100 50 0 100 200 300

FROM EVAPORATION RECORD TO END
OF 1946 AND SATURATION DEFICIT
RECORDS USING WAITE FORMULA

$e = 263\ S.d.$

(SEE LETTERPRESS ACCOMPANYING.)

REFERENCE TO DISTRICTS

WESTERN AUSTRALIA
1 North Kimberley
2 East Kimberley
3 West Kimberley
4 De Grey
5 Fortescue
6 West Gascoyne
7 East Gascoyne
8 North Coastal
9 Central Coast
9a South Coastal
10 Central North
10a Central South
South West
11 Eucla
12 South East
13 North East

NORTHERN TERRITORY
14 Northern Rivers
14a
15 Northern Plateau

SOUTH AUSTRALIA
16 North West Interior
17 Far North Interior
18 Western
19 Upper North
20 North East
21 Lower North
22 Central West
23 Central East
24 Murray Valley
25 South-East–Upper

QUEENSLAND
27 Peninsula North
28 Peninsula South
29 Carpentaria–Lower
30 Carpentaria–Upper
31 Barron
32 Herbert
33 East Central Coast
34 West Central Coast

QUEENSLAND
35 Central Highlands
36 Central Lowlands
37 Upper Western
38 Lower Western
39 Port Curtis
40 Moreton
41 East Darling Downs
42 West Darling Downs
43 Maranoa
44 Warrego
45 Far South West

NEW SOUTH WALES
46 Trans Darling North
47 Trans Darling South
48 Cis-Darling North
49 Cis-Darling South
50 Upper Bogan
51 Lower Macquarie
52 West Gwydir
53 East Gwydir
54 Nandewars
55 Liverpool Plains
56 West New England
57 East New England
58 Clarence
59 Orara
60 Manning
61 Hunter
62 Cudgegong
63 Central Plateau
64 Warrumbungles–Highlands
65 Lowlands
66 Sydney
67 Nepean
68 Illawarra
69 South Coast
70 Upper Murrumbidgee

NEW SOUTH WALES
No. (continued)
71 Snowy Mountains
72 Southern Portion–S.W. Slope
73 Northern Portion–S.W. Slope
74 East Riverina
75 West Riverina

VICTORIA
76 Mallee North
77 Mallee South
78 Wimmera North
79 Wimmera South
80 Lower North
81 Upper North
82 Lower North-East
83 Upper North-East
84 East Gippsland
85 West Gippsland
86 East Central
87 West Central
88 North Central
89 Volcanic Plains
90 West Coast

TASMANIA
91 Northern
92 East Coast
93 Midland
94 South Eastern
95 Derwent
96 Central Plateau
97 West Coast Mountain Region
98 King Island
99 Flinders Island

shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) *Comments on Map of Average Annual Evaporation.* A map of average annual evaporation in Australia (*see* page 41) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263 [" Atmospheric Saturation Deficit in Australia "—J. A. Prescott (Trans. Royal Society, S.A., Vol. lv., 1931)]. Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula, $e = 263$ s.d., is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have been applied accordingly. No evaporation records are available north of latitude 20°, and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (N.T.) and Winton (Q'land), and to a lesser degree Blackall (Q'land) and Marble Bar (W.A.).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

(iii) *Monthly Evaporation Curves.* The diagrams (page 34) showing the mean monthly evaporation in various parts of Australia disclose how characteristically different are the amounts for the several months in different localities.

9. **Rainfall.**—(i) *General.* The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its physiographical features.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the reliable, generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

(ii) *Distribution of Rainfall.* The average annual rainfall map of Australia (page 37) shows that the heaviest yearly falls occur on the north coast of Queensland (up to over 160 inches) and in Western Tasmania (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay (New South Wales) to the northern part of Cape York Peninsula, also around Darwin (Northern Territory), on the West Kimberley coast, near Cape Leeuwin (Western Australia), about the

Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.

(iii) *Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall.* Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially near the coast. All these tropical rains, however, favour mostly the northern and eastern parts of the area referred to ; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over Southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and with irregular rains.

The map showing mean monthly distribution of rainfall over Australia (page 38) gives in graphic form information on the amount and occurrence of rain.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the north coast-line has an average annual rainfall of 182.01 inches and Tully on the Tully River 177.54 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russel Rivers have an average annual rainfall of between 143 and 169 inches. The maximum and minimum falls there are :—Deeral, 287.18 in 1945 and 109.74 inches in 1943, or a range of 177.44 inches ; Tully, 234.37 in 1936 and 104.98 inches in 1943, or a range of 129.39 inches ; Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches ; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches ; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.82 inches were registered. The records at this station cover a period of 59 years.

In nineteen years of record Tully has exceeded 200 inches on eight occasions, whilst in a record of 28 complete years Harvey Creek has four times exceeded this figure At Tully 234.37 inches were recorded during 1936 and at Harvey Creek the total for 1921 was 254.77 inches. At the South Johnstone Sugar Experiment Station 202.52 inches were recorded in 1921.

In Tasmania the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 144 inches, with a maximum of 175.12 inches in 1924.

The driest known part of the continent is in the Lake Eyre district in South Australia (the only part of the continent below sea level), where the annual average is only 5 inches, and where the total rarely exceeds 10 inches for the twelve months.

The inland districts of Western Australia were at one time regarded as the driest part of Australia, but authentic observations in recent years over most settled districts in the east of that State show that the annual average is about 10 inches.

(v) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map (page 37) which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table :—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.

Average Annual Rainfall.	N.S.W. (*a*)	Victoria.	Queensland.	South Australia	Western Australia.	Tasmania. (*b*)	Northern Territory	Total. (*b*)
	%	%	%	%	%	%	%	%
Under 10 inches ..	19.7	Nil	13.0	82.8	58.0	Nil	24.7	37.6
10—15 " ..	23.5	22.4	14.4	9.4	22.4	Nil	32.4	19.9
15—20 " ..	17.5	15.2	19.7	4.5	6.8	0.7	9.7	10.9
20—25 " ..	14.2	17.9	18.8	2.2	3.7	11.0	6.6	9.1
25—30 " ..	9.1	18.0	11.6	0.8	3.7	11.4	9.3	7.3
30—40 " ..	9.9	16.1	11.1	0.3	3.3	20.4	4.7	6.6
Over 40 " ..	6.1	10.4	11.4	Nil	2.1	56.5	12.6	8.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(*a*) Includes Australian Capital Territory. (*b*) Over an area of 2,777 square miles no records are available.

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with a normal rainfall of 46.34 inches, occupies the chief place: Brisbane, Perth, Melbourne, Hobart, Canberra and Adelaide follow in that order, Adelaide with 21.09 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.49 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected. (See map on p. 38). The figures for Northern Rivers, District 14, show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse for, while the summer months are dry, the winter ones are very wet. In the districts containing Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Curves of Rainfall and Evaporation.* The relative amounts of rainfall and evaporation at different times through the year are clearly indicated in the graphs (page 34). Inspection thereof and of the map on page 41 will show how large is the evaporation when water is fully exposed to the direct rays of the sun and to wind.

(vii) *Tables of Rainfall.* The table of rainfall for a fairly long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions.

RAINFALL : AUSTRALIAN CAPITAL CITIES.

Year.	CANBERRA.(*a*)		PERTH.		ADELAIDE.		BRISBANE.		SYDNEY.		MELBOURNE.		HOBART.(*b*)	
	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
	in.		in.		in.		in.		in.		in.		in.	
1920 ..	..	..	40.35	124	26.70	119	39.72	122	43.42	159	28.27	162	18.00	182
21 ..	..	..	41.09	135	22.64	100	54.31	167	43.34	140	29.76	154	18.04	159
22 ..	..	..	31.86	135	23.20	117	35.82	109	39.35	136	25.02	151	28.27	189
23 ..	..	..	44.47	134	29.79	139	23.27	93	37.01	123	22.64	158	32.93	198
24 ..	..	..	33.79	119	23.44	143	41.08	114	37.01	136	36.48	171	28.76	197
25 ..	..	..	31.41	126	21.91	118	53.10	139	50.35	145	17.57	144	22.67	170
26 ..	..	..	49.22	167	22.20	116	30.82	111	37.07	127	20.51	149	25.79	187
27 ..	..	..	36.59	133	16.92	101	62.08	130	48.56	138	17.98	135	20.13	185
28 ..	18.59	90	44.88	140	19.43	107	52.64	145	40.07	130	24.09	151	30.23	205
29 ..	23.12	70	36.77	132	17.51	119	39.78	118	57.90	129	28.81	168	26.55	194
30 ..	17.33	82	39.80	129	18.65	116	41.22	144	44.47	141	25.41	145	19.38	152
31 ..	24.02	103	39.18	118	22.26	145	66.72	136	49.22	153	28.63	164	27.17	179
32 ..	20.18	118	39.40	121	25.04	141	24.79	97	37.47	146	31.08	179	30.29	155
33 ..	20.78	96	32.47	116	22.12	130	49.71	118	42.71	153	22.28	136	23.18	182
34 ..	35.58	131	40.61	120	20.24	125	54.26	117	64.91	183	33.53	157	23.17	194
35 ..	23.78	95	32.28	129	23.45	140	34.64	111	30.97	131	29.98	183	32.22	196
36 ..	26.24	108	30.64	118	19.34	121	21.77	101	30.22	130	24.30	187	19.60	178
37 ..	20.46	82	35.28	120	23.01	128	34.79	113	52.00	157	21.45	144	20.65	160
38 ..	19.26	79	29.64	111	19.26	119	43.49	110	39.17	132	17.63	131	31.32	169
39 ..	27.63	116	45.70	123	23.29	139	41.43	122	33.67	127	33.11	166	27.23	188
40 ..	17.38	64	20.00	98	16.16	116	42.37	93	39.34	125	19.83	126	17.17	135
41 ..	19.55	91	34.74	122	22.56	126	31.50	105	26.74	129	31.78	157	23.49	145
42 ..	25.76	104	39.24	140	25.44	133	44.01	125	48.29	121	29.79	148	19.42	163
43 ..	24.59	123	31.46	117	17.84	135	50.68	126	50.74	136	18.80	150	20.84	149
44 ..	12.05	75	27.39	123	17.13	114	27.85	100	31.04	115	21.32	143	26.23	151
45 ..	22.35	100	52.67	137	17.85	105	48.16	130	46.47	136	19.22	152	16.92	157
46 ..	22.31	94	41.47	122	22.59	135	38.66	83	36.05	111	29.80	177	39.45	193
Average	22.16	96	34.94	121	21.09	124	44.58	125	46.34	152	25.54	141	24.42	153
No. of Years	19	19	71	71	108	108	95	87	88	88	91	91	64	64

(*a*) Commonwealth Forestry Bureau; records in issues prior to No. 36 were for the station at Acton which closed down in 1939. (*b*) Records taken from present site commenced 1883.

10. **Remarkable Falls of Rain.**—The following are the most remarkable falls of rain in the various States and Territories which have occurred within a period of twenty-four hours. For other very heavy falls at various localities reference may be made to Official Year Book No. 14, pp. 60–64, No. 22, pp. 46–48 and No. 29, pp. 43, 44 and 51 :—

HEAVY RAINFALLS : NEW SOUTH WALES, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Broger's Creek ..	14 Feb., 1898	20.05	South Head (near Sydney) ..	16 Oct., 1844	20.41
,, ,, ..	13 Jan., 1911	20.83	Towamba ..	5 Mar., 1893	20.00
Cordeaux River ..	14 Feb., 1898	22.58	Viaduct Creek ..	15 ,, 1936	20.00
Morpeth	9 Mar., 1893	21.52			

HEAVY RAINFALLS : QUEENSLAND, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Babinda (Cairns) ..	2 Mar., 1935	24.14	Kuranda (Cairns) ..	2 Apr., 1911	28.80
Banyan (Cardwell)	12 Feb., 1927	24.00	Landsborough ..	2 Feb., 1893	25.15
Buderim Mountain	11 Jan., 1898	26.20	Macnade Mill ..	6 ,, 1901	23.33
Carruchan ..	24 Jan., 1934	24.00	Plane Creek (Mackay) ..	26 Feb., 1913	27.73
Crohamhurst (Blackall Range)	2 Feb., 1893	35.71	Sarina	26 Feb., 1913	27.75
Deeral	2 Mar., 1935	27.60	Tully Mill ..	12 Feb., 1927	23.86
Flat Top Island ..	21 Jan., 1918	25.18	Woodlands (Yepp'n)	3 Jan., 1893	23.07
Goondi	30 Jan., 1913	24.10	Yarrabah ..	2 Apr., 1911	30.65
Harvey Creek ..	3 ,, 1911	27.75			

HEAVY RAINFALLS : WESTERN AUSTRALIA, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Balla Balla ..	21 Mar., 1899	14.40	Pilbara	2 Apr., 1898	14.04
Boodarie ..	21 Jan., 1896	14.53	Roebuck Plains ..	5 Jan., 1917	14.01
Broome	6 ,, 1917	14.00	,, ,, ..	6 ,, 1917	22.36
Carlton Hill ..	7 Feb., 1942	12.75	Thangoo	17-19 Feb.'96	24.18
Derby	7 ,, 1917	16.47	Towrana ..	1 Mar., 1943	12.16
Fortesque ..	3 May, 1890	23.36	Whim Creek ..	3 Apr., 1898	29.41
Jimba Jimba ..	1 Mar., 1943	11.54	Winderrie ..	17 Jan., 1923	14.23
Marble Bar ..	2 ,, 1941	12.00			

HEAVY RAINFALLS : NORTHERN TERRITORY, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Bathurst Island Mission ..	7 Apr., 1925	11.85	Cape Don ...	13 Jan., 1934	13.58
Birrimbah ..	6 Mar., 1935	16.50	Darwin	7 Dec., 1915	11.67
Borroloola ..	14 ,, 1899	14.00	Groote Eylandt ..	25 Mar., 1940	11.75
Brock's Creek ..	24 Dec., 1915	14.33	Timber Creek ..	5 Feb., 1942	13.65

HEAVY RAINFALLS : SOUTH AUSTRALIA, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Newcastle Waters	28 Dec., 1945	6.37
Coober Pedy ..	19 Feb., 1938	6.50	Nunjikompita ..	21 Feb., 1938	6.50
Cunnamulla ..	18 Feb., 1946	8.20	Wallaroo ..	18 Feb., 1946	5.74
Edithburg ..	18 Feb., 1946	7.46	Wilmington ..	1 Mar., 1921	7.12
Lobethal ..	18 Apr., 1938	6.44	Winulta ..	18 Feb., 1946	6.61
Maitland ..	18 Feb., 1946	7.21			

HEAVY RAINFALLS : VICTORIA, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Blackwood "Greenhill"	26 Jan., 1941	8.98	Korumburra ..	1 Dec., 1934	8.51
Cann River ..	16 Mar., 1938	9.94	Mt. Buffalo ..	6 June, 1917	8.53
Cunninghame ..	26 Dec., 1935	8.50	Murrungowar ..	16 Mar., 1938	8.36
Erica	1 Dec., 1934	8.66	Olinda	1 Dec., 1934	9.10
Hazel Park ..	1 ,, ,,	10.50	Tambo Crossing ..	13 July, 1925	8.89
Kalorama ..	1 ,, ,,	10.05	Tonghi Creek ..	27 Feb., '1919	9.90

HEAVY RAINFALLS : TASMANIA, UP TO 1946, INCLUSIVE.

Name of Town or Locality	Date.	Amnt.	Name of Town or Locality.	Date	Amnt.
		in.			in.
Cullenswood ..	5 Apr., 1929	11.12	Riana	5 Apr., 1929	11.08
Gould's Country ..	8-10 Mar.,'11	15.33	The Springs ..	30-31 Jan., '16	10.75
Lottah	8-10 ,, ,,	18.10	Triabunna ..	5 June, 1923	10.20
Mathinna ..	5 Apr., 1929	13.25			

HEAVY RAINFALLS: AUSTRALIAN CAPITAL TERRITORY, UP TO 1946, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt
		in.			in.
Canberra (Acton) ..	27 May, 1925	6.84	Uriarra	27 May, 1925	6.57
Cotter Junction ..	" "	7.13			

11. **Snowfall.**—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Mt. Kosciusko and similar localities the snow never entirely disappears after a severe winter.

12. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

13. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions in the interior of the continent, ranged as high as 30.78 inches (at Kalgoorlie on 28th July, 1901) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. The mean barometric pressure for the Australian capitals is shown on graphs (page 35).

14. **Wind.**—(i) *Trade Winds.* The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the prevailing westerly winds. As the belt of the earth's atmosphere in which they blow apparently follows the sun's ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months the anticyclonic belt travels in very high latitudes, thereby bringing the south-east trade winds as far south as 30° south latitude. The prevailing westerly winds retreat a considerable distance to the south of Australia, and are rarely in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and only operate to the north of the tropics for the greater part of the winter. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from the Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, and occasionally penetrate to almost tropical latitudes.

(ii) *North-west Monsoon.* As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence nor regularity of the Indian south-west monsoon but is sufficiently characteristic for the summer in the north of Australia to be called the "North-west Season". In Central and Eastern Queensland, the north-west monsoon in the summer has comparatively little effect and the trade winds, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the north-west monsoon is itself replaced first by light variable winds and then by the trade winds.

(iii) *Land and Sea Breezes.* The prevailing winds next in order of importance are the land and sea breezes. On the east coast the sea breezes which come in from the north-east, when in full force, frequently reach the velocity of a gale during the afternoon in the summer months, the maximum hourly velocity, ordinarily attained about 3 p.m., not infrequently attaining a rate of 35 to 40 miles per hour. This wind, although strong, is usually shallow in depth, and does not ordinarily penetrate more than 9 or 12 miles inland.

The land breezes on the east coast blow out from a westerly direction during the night.

On the western shores of the continent the directions are reversed. The sea breezes come in from the south-west, and the land breezes blow out from the north-east.

(iv) *Inland Winds.* Inland, the direction of the prevailing winds is largely regulated by the seasonal changes of pressure, so disposed as to cause the winds to radiate spirally outward from the centre of the continent during the winter months, and to circulate spirally from the seaboard to the centre of Australia during the summer months.

(v) *Prevailing Direction at the Capital Cities.* In Canberra at 9 a.m. the air is usually calm, particularly during the winter months, but such winds as do occur are predominantly north-westerly, though a proportion of south-easterly winds occur during the autumn. At 3 p.m. the predominant wind is north-westerly.

In Perth at 9 a.m. east to south-east winds prevail from September to March, while from April to August north-north-east to east winds predominate. At 3 p.m. the prevailing wind is south-west from October to May inclusive and westerly at other times.

In Adelaide at 9 a.m., the predominant wind is north-easterly from May to August, but during the rest of the year no particular direction is outstanding. At 3 p.m. the predominant wind is south-westerly for all months except May, June and July. Throughout the year winds with an easterly component are rare in the afternoon.

In Brisbane at 9 a.m. the most frequent winds during the colder two-thirds of the year come from the south or south-west, while in the warmer months south to south-east winds are more usual. At 3 p.m. winds with an easterly component predominate, especially north-easterlies during the warmer half of the year.

In Sydney at 9 a.m., by far the most prevailing wind is a westerly, particularly during the colder two-thirds of the year. At 3 p.m. during the warmer two-thirds of the year, winds with an easterly component are most frequent with a smaller proportion of southerlies and westerlies during the winter months.

In Melbourne at 9 a.m., northerlies are the most frequent winds during the period February to October with a moderate proportion of westerlies in the spring. During the summer months, winds with a southerly component are in evidence to a slightly greater degree than any others. At 3 p.m. southerly winds prevail during the warmer two-thirds of the year with the frequency of northerlies increasing during the colder months.

In Hobart at 9 a.m. the most favoured directions are from the north-west and north with a good proportion of south-easterlies showing up at 3 p.m. during the warmer months.

15. **Cyclones and Storms.**—The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to cyclonic storms, evolved from the V-shaped depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast-line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these cyclones are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east. Only a small percentage, however, reach Australia, the majority recurving in their path to the east of New Caledonia.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive, and cause great havoc amongst the pearl-fishers. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters", a characteristic feature of the eastern part of Australia, appear in previous issues of the Official Year Book (see No. 6, pp. 84–86), and a special article dealing with "Australian Hurricanes and Related Storms" appears in Official Year Book No. 16, pp. 80–84.

16. **Influences affecting Australian Climate.**—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forest on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternative periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

17. **Rainfall and Temperatures, Various Cities.**—The Official Year Book No. 34, p. 28, shows rainfall and temperature for various important cities throughout the world, and for the Australian capitals.

18. **Climatological Tables.**—The averages and extremes for a number of climatological elements have been determined from long series of observations at the Australian capitals up to and including the year 1946. These are given in the following tables:—

CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY.

LAT. 35° 18′ S., LONG. 149° 06′ E. HEIGHT ABOVE M.S.L. 1,906 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 20 feet.) Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction. 9 a.m.	Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m. and 3 p.m.(a)	No. of Clear Days.
No. of years observations.	17	19	19	(b)	20	20	19	11	17	18
January	29.827	5.2	14.9 23/33	—	NW	NW	9.015	1.0	4.7	7.3
February ..	29.901	4.7	15.3 24/33	—	E	NW	7.034	2.7	4.7	6.5
March ..	30.008	4.2	18.2 28/42	—	E	NW	5.622	0.0	5.0	6.8
April	30.066	4.0	18.6 8/45	—	NW	NW	3.440	0.5	5.4	4.4
May	30.164	3.1	12.6 3/30	—	NW	NW	2.072	0.1	5.3	5.7
June	30.135	3.9	16.1 2/30	—	NW	NW	1.336	0.0	5.9	4.3
July	30.119	3.7	23.4 7/31	—	NW	NW	1.343	0.0	5.7	4.9
August ..	30.065	4.5	15.7 25/36	—	NW	NW	1.898	0.1	5.5	5.0
September ..	30.040	4.9	17.4 28/34	—	NW	NW	3.106	0.4	5.1	5.9
October ..	29.976	4.6	12.4 27/40	—	NW	NW	4.797	0.6	5.2	5.4
November ..	29.902	5.0	17.2 28/42	—	NW	NW	6.221	1.2	5.5	4.2
December ..	29.835	5.1	16.1 11/38	—	NW	NW	7.977	1.1	5.1	5.5
Year { Totals ..	—	—	—	—	—	—	53.861	7.7	—	65.9
Year { Averages	30.003	4.4	—	—	NW	NW	—	—	5.3	—
Year { Extremes	—	—	23.4 7/7/31	—	—	—	—	—	—	—

(a) Scale 0–10. (b) No record.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.). Mean Max.	Mean Temperature (°Fahr.). Mean Min.	Mean Temperature (°Fahr.). Mean	Extreme Shade Temperature (°Fahr.). Highest.	Extreme Shade Temperature (°Fahr.). Lowest.	Extreme Range.	Extreme Temperature (°Fahr.). Highest in Sun.	Extreme Temperature (°Fahr.). Lowest on Grass.	Mean Daily Hours of Sunshine. (a)
No. of years over which observation extends.	20	20	20	20	20	20	(b)	18	19
January	83.2	56.4	69.8	107.4 11/39	39.5 8/38	67.9	—	32.4 (c)	8.1
February ..	81.4	56.0	68.7	99.8 13/33	35.0 (d)	64.8	—	26.5 23/43	7.6
March	76.3	52.4	64.3	99.1 6/38	36.5 21/32	62.6	—	26.4 26/35	7.3
April	66.5	45.2	55.9	89.7 6/38	29.0 29/34	60.7	—	19.0 18/44	6.6
May	59.8	38.6	49.2	72.6 1/36	22.5 9/29	50.1	—	15.6 (g)	5.2
June	52.5	35.1	43.8	61.0 (e)	18.1 20/35	42.9	—	8.9 25/44	4.3
July	51.7	33.7	42.7	63.5 16/34	20.0 (f)	43.5	—	10.8 9/37	4.8
August	55.1	35.6	45.3	70.5 28/34	21.0 3/29	49.5	—	10.1 6/44	5.8
September	61.1	38.9	50.0	81.5 16/34	25.2 6/45	56.3	—	13.0 6/45	7.2
October	67.7	44.0	55.9	90.0 13/46	29.0 24/28	61.0	—	18.2 2/45	7.8
November	73.8	49.4	61.6	101.4 19/44	32.2 11/36	69.2	—	25.9 6/40	7.9
December	79.6	53.7	66.6	103.5 27/38	36.0 24/28	67.5	—	30.2 2/39	8.1
Year { Averages ..	67.4	44.9	56.1	—	—	—	—	—	6.7
Year { Extremes ..	—	—	—	107.4 11/1/39	18.1 20/6/35	89.3	—	8.9 25/6/44	—

(a) Mean monthly totals previously published. (b) No record. (c) 8/38 and 18/43. (d) 22/31 and 23/31. (e) 3/27, 28/30 and 30/30. (f) 19/29, 9/37 and 27/43. (g) 13/37 and 15/46.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%) at 9 a.m. Mean.	Rel. Hum. (%) at 9 a.m. Highest Mean.	Rel. Hum. (%) at 9 a.m. Lowest Mean.	Rainfall (inches). Mean Monthly.	Rainfall (inches). Mean No. of Days of Rain.	Rainfall (inches). Greatest Monthly.	Rainfall (inches). Least Monthly.	Rainfall (inches). Greatest in One Day.	Fog. Mean No. of Days of Fog.
No. of years over which observation extends.	19	19	19	19	20	20	20	20	20	16
January	0.373	52	69	39	2.03	7	6.69 1941	0.02 1932	2.03 20/37	0.0
February	0.384	57	71	40	1.92	6	4.93 1928	0.01 1933	3.24 17/28	0.0
March	0.375	64	76	48	1.83	6	5.22 1932	0.01 1940	1.82 15/32	0.3
April	0.317	71	81	54	2.16	8	3.75 1935	0.07 1942	2.52 9/45	0.7
May	0.253	79	87	67	1.48	7	5.53 1931	0.06 1935	2.20 26/42	4.0
June	0.211	82	90	72	1.64	9	6.09 1931	0.18 1944	1.65 24/31	5.4
July	0.200	81	87	73	1.59	10	4.09 1933	0.27 1940	2.02 13/33	4.5
August	0.212	75	88	60	2.03	11	4.71 1939	0.36 1944	2.07 12/29	1.6
September	0.235	65	72	51	1.49	9	3.03 1937	0.13 1946	1.75 3/47	0.5
October	0.271	59	72	46	2.25	9	6.59 1934	0.34 1940	2.51 25/34	0.2
November	0.305	54	67	38	2.03	8	4.32 1946	0.28 1936	1.78 7/27	0.1
December	0.341	51	67	37	2.00	8	4.05(b)1936	0.16 1938	2.29 28/29	0.0
Year { Totals ..	—	—	—	—	22.45	98	—	—	—	17.3
Year { Averages ..	0.277	66	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	37	—	—	6.69(b)1/1941	0.01 (a)	3.24 17/2/28	—

(a) 2/1933 and 3/1940. (b) 8.80 in December, 1947.

CLIMATOLOGICAL DATA : PERTH, WESTERN AUSTRALIA.

LAT. 31° 57′ S., LONG. 115° 51′ E. HEIGHT ABOVE M.S.L. 210 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 71 feet.) Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction. 9 a.m.	Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.
No. of years observations.	62	48	48	5 (b)	5 (b)	5 (b)	49	50	39	50
January	29.904	10.9	33.2 27/98	48	ESE	SW	10.32	1.9	2.9	14.3
February ..	29.923	10.4	27.1 6/08	46	ESE	SW	8.65	1.5	3.0	12.8
March ..	29.981	9.7	27.1 6/13	64	ESE	SW	7.50	1.7	3.6	12.1
April	30.068	8.3	39.8 25/00	49	ENE	SW	4.71	1.5	4.3	8.3
May	30.067	7.9	34.4 29/32	59	NE	SW	2.74	2.5	5.5	5.6
June	30.058	8.1	38.1 17/27	78	NNE	WNW	1.76	2.5	5.9	4.0
July	30.089	8.4	42.3 20/26	70	NNE	W	1.72	2.1	5.7	5.0
August ..	30.083	8.7	40.3 15/03	77	NE	W	2.35	1.7	5.6	5.6
September ..	30.065	9.0	36.0 11/05	73	E	WSW	3.41	1.0	4.8	6.6
October ..	30.035	9.5	33.7 6/16	52	SE	SW	5.38	1.0	4.7	7.0
November ..	29.990	10.1	32.4 18/97	59	SE	SW	7.64	1.4	3.9	8.8
December ..	29.925	10.5	32.3 6/22	64	SE	SW	9.69	1.8	3.3	12.7
Year Totals ..	—	—	—	—	—	—	65.87	20.6	—	102.8
Year Averages	30.016	9.3	—	—	E	SW	—	—	4.4	—
Year Extremes	—	—	42.3 20/7/26	78	—	—	—	—	—	—

(*a*) Scale 0–10. (*b*) Reliable records since installation of Dines anemometer.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.). Mean Max.	Mean Min.	Mean	Extreme Shade Temperature (°Fahr.). Highest.	Lowest.	Extreme Range.	Extreme Temperature (°Fahr.). Highest in Sun.	Lowest on Grass.	Mean Daily Hours of Sunshine.(a)
No. of years over which observation extends.	50	50	50	50	50	50	47	48	49
January	84.5	63.1	73.8	110.2 12/34	48.6 20/25	61.6	177.3 22/14	40.4 1/21	10.5
February	85.1	63.4	74.3	112.2 8/33	47.7 1/02	64.5	173.7 4/34	39.8 1/13	9.8
March	81.4	61.2	71.3	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	8.7
April	76.2	57.3	66.7	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 21/14	7.3
May	68.8	52.9	60.8	90.4 2/07	34.3 11/14	56.1	146.0 4/25	25.3 11/14	5.7
June	64.2	49.5	56.8	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.3 11/37	4.8
July	62.8	47.8	55.3	76.4 21/21	34.2 7/10	42.2	133.2 13/15	25.1 30/20	5.3
August	63.9	48.4	56.1	82.0 21/40	35.4 31/08	46.6	145.1 29/21	26.7 24/35	5.9
September	66.5	50.5	58.5	90.9 30/18	38.8 18/00	52.1	153.6 29/10	29.2 21/16	7.0
October	69.4	52.5	60.9	95.3 30/22	40.0 16/31	55.3	157.5 31/30	29.8 16/31	8.0
November	76.2	57.0	66.6	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.4 6/10	9.7
December	81.7	60.8	71.3	107.9 20/04	48.0 2/10	59.9	168.8 11/27	39.0 (b)	10.5
Year Averages ..	73.4	55.4	64.4	—	—	—	—	—	7.8
Year Extremes ..	—	—	—	112.2 8/2/33	34.2 7/7/16	78.0	177.3 22/1/14	25.1 30/7/20	—

(*a*) Mean monthly totals previously published. (*b*) 2/10 and 12/20.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%) at 9 a.m. Mean.	Highest Mean.	Lowest Mean.	Rainfall (inches). Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Fog. Mean No. of Days of Fog.
No. of years over which observation extends.	49	49	49	49	71	70	71	71	71	50
January	0.432	51	61	41	0.33	3	2.71 1879	0.00 (a)	1.74 27/79	0.2
February	0.438	53	65	46	0.38	3	2.98 1915	0.00 (a)	1.63 26/15	0.3
March	0.430	58	66	46	0.83	5	5.71 1934	0.00 (a)	3.03 9/34	0.5
April	0.394	61	73	51	1.74	7	5.85 1926	0.00 1920	2.62 30/04	0.9
May	0.368	72	81	61	5.04	14	12.13 1879	0.98 1903	3.00 17/42	1.4
June	0.338	76	83	68	7.22	17	18.75 1945	2.16 1877	3.90 6/20	1.6
July	0.319	76	84	69	6.78	18	12.28 1926	2.42 1876	3.00 4/91	1.7
August	0.319	73	81	62	5.79	18	12.58 1945	0.46 1902	2.91 14/45	1.0
September	0.338	67	75	58	3.37	15	7.84 1923	0.34 1916	1.82 4/31	0.2
October	0.346	60	63	52	2.10	12	7.87 1890	0.15 1946	1.73 3/33	0.2
November	0.374	54	63	45	0.80	6	2.78 1916	0.00 1891	1.37 2/38	0.2
December	0.415	50	63	44	0.57	4	3.05 1888	0.00 (b)	1.72 1/88	0.2
Year Totals ..	—	—	—	—	34.95	122	—	—	—	8.4
Year Averages ..	0.376	63	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	84	41	—	—	18.75 6/1945	0.00 (c)	3.90 6/6/20	—

(*a*) Various years. (*b*) 1886 and 1924. (*c*) Various months in various years.

CLIMATOLOGICAL DATA : ADELAIDE, SOUTH AUSTRALIA.

LAT. 34° 56′ S., LONG. 138° 35′ E. HEIGHT ABOVE M.S.L. 140 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 75 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years observations.	90	69	69	30	69	69	77	75	79	65
January ..	29.915	10.5	31.6 19/99	72	SW	SW	9.171	2.2	3.6	8.6
February ..	29.953	10.0	28.8 22/96	62	NE	SW	7.468	1.9	3.6	7.8
March ..	30.039	8.8	26.2 9/12	63	S	SW	6.119	2.0	4.0	7.6
April	30.120	8.4	32.2 10/96	57	NE	SW	3.612	1.5	5.1	4.6
May	30.126	8.3	31.7 9/80	63	NE	NW	2.139	1.7	5.8	2.5
June	30.107	8.8	31.3 12/78	67	NE	N	1.316	1.7	6.2	1.8
July	30.123	9.0	28.1 25/82	55	NE	NW	1.337	1.7	5.9	1.9
August ..	30.094	9.6	32.2 31/97	57	NE	SW	1.944	2.0	5.7	2.7
September ..	30.044	10.0	30.0 2/87	69	NNE	SW	2.960	2.2	5.3	3.5
October ..	30.003	10.4	32.0 28/98	59	NNE	SW	4.884	3.1	5.1	3.9
November ..	29.979	10.4	28.2 2/04	63	SW	SW	6.726	3.1	4.7	5.4
December ..	29.920	10.5	28.1 12/91	75	SW	SW	8.593	2.5	4.0	6.9
Year Totals ..	—	—	—	—	—	—	56.269	25.6	—	57.2
Averages	30.035	9.5	—	—	NE	SW	—	—	4.9	—
Extremes	—	—	32.2 (b)	75	—	—	—	—	—	—

(a) Scale 0–10. (b) 10/4/96 and 31/8/97.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.(a)
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	90	90	90	90	90	90	55	86	65
January	85.9	61.3	73.6	117.7 12/39	45.1 21/84	72.6	180.0 18/82	36.5 14/79	9.9
February	85.7	61.7	73.7	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	9.2
March	81.0	58.9	69.9	110.5 9/34	43.9 21/33	66.6	174.0 17/83	32.1 21/33	7.8
April	73.2	54.4	63.8	98.6 5/38	39.6 15/59	59.0	155.0 1/83	30.2 16/17	6.0
May	65.8	50.2	58.0	89.5 4/21	36.9 (b)	52.6	148.2 12/79	25.6 19/28	4.8
June	60.5	46.6	53.5	76.0 23/65	32.5 (c)	43.5	138.8 18/79	21.0 24/44	4.1
July	59.1	44.7	51.9	74.0 11/06	32.0 24/08	42.0	134.5 26/90	22.1 30/29	4.4
August	62.0	45.9	53.9	85.0 31/11	32.3 17/59	52.7	140.0 31/92	22.8 11/29	5.3
September	66.4	47.9	57.2	91.3 29/44	32.7 4/58	58.6	160.5 23/82	25.0 25/27	6.2
October	72.4	51.3	61.9	102.9 21/22	36.0 —/57	66.9	162.0 30/21	27.8 (e)	7.3
November	78.5	55.3	66.9	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	8.6
December	83.2	58.8	71.0	114.6 29/31	43.0 (d)	71.6	175.7 7/99	32.5 4/84	9.6
Year Averages ..	72.8	53.1	62.9	—	—	—	—	—	6.9
Extremes ..	—	—	—	117.7 12/1/39	32.0 24/7/08	85.7	180.0 18/1/82	21.0 24/6/44	—

(a) Mean monthly totals previously published. (b) 26/1895 and 24/1904. (c) 27/1876 and 24/1944
(d) 16/1861 and 4/1906. (e) 2/1918 and 4/1931.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) 9 a.m.			Rainfall (inches).					Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog
No. of years over which observation extends.	79	79	79	79	108	108	108	108	108	47
January	0.340	39	59	29	0.79	4	4.00 1850	0.00 (a)	2.30 2/89	0.0
February	0.356	41	56	30	0.78	4	6.09 1925	0.00 (a)	5.57 7/25	0.0
March	0.343	46	58	29	1.00	5	4.60 1870	0.00 (a)	3.50 5/78	0.0
April	0.333	56	72	37	1.75	9	6.78 1853	0.00 1945	3.15 5/60	0.0
May	0.317	67	76	49	2.68	13	7.75 1875	0.10 1934	2.75 1/53	0.5
June	0.297	76	84	67	2.99	15	8.58 1916	0.42 1886	2.11 1/20	1.1
July	0.277	76	87	66	2.62	16	5.38 1865	0.37 1899	1.75 10/65	1.4
August	0.284	69	78	54	2.51	16	6.24 1852	0.33 1944	2.23 19/51	0.5
September	0.293	60	72	44	2.07	13	5.83 1923	0.45 1896	1.59 20/23	0.1
October	0.298	51	67	29	1.69	11	3.83 1870	0.17 1914	2.24 16/08	0.0
November	0.309	43	57	31	1.17	8	4.10 1934	0.04 1885	2.08 7/34	0.0
December	0.323	39	50	31	1.04	6	3.98 1861	0.00 1904	2.42 23/13	0.0
Year Totals ..	—	—	—	—	21.09	120	—	—	—	3.6
Averages ..	0.309	53	—	—	—	—	—	—	—	—
Extremes ..	—	—	87	29	—	—	8.58 6/1916	0.00 (b)	5.57 7/2/25	—

(a) Various years. (b) Various months in various years.

CLIMATOLOGICAL DATA : BRISBANE, QUEENSLAND.

LAT. 27° 28′ S., LONG. 153° 2′ E. HEIGHT ABOVE M.S.L. 134 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 105 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No of years observations.	60	32	32	32	60	60	38	60	55	38
January ..	29.869	7.2	19.7 23/47	51	SE	NE	6.674	7.2	5.7	3.3
February ..	29.903	7.2	21.0 5/31	67	SE	NE & E	5.414	5.6	5.8	2.4
March ..	29.965	6.9	20.3 1/29	50	S	E	5.128	4.4	5.3	5.1
April	30.039	6.2	16.7 3/25	57	S	E	4.115	3.7	4.5	7.8
May	30.084	6.0	17.9 17/26	48	S	SE	3.179	3.2	4.3	8.7
June	30.076	5.9	19.0 14/28	58	SW	W	2.515	2.3	4.2	9.5
July	30.078	5.8	15.0 2/23	52	SW	W	2.760	2.4	3.7	12.6
August ..	30.093	6.0	14.8 4/35	53	SW	NE	3.842	3.6	3.3	13.4
September ..	30.050	6.3	14.4 17/44	57	S	NE	4.464	5.3	3.4	12.7
October ..	30.008	6.6	15.7 1/41	62	S	NE	5.758	6.7	4.1	8.3
November ..	29.958	7.0	15.5 10/28	59	N & SE	NE	6.334	8.5	4.9	5.8
December ..	29.888	7.3	19.5 15/26	79	SE	NE	7.044	9.3	5.3	3.7
Year Totals ..	—	—	—	—	—	—	57.227	62.2	—	93.3
Year Averages	30.001	6.5	—	—	S	NE	—	—	4.5	—
Year Extremes	—	—	21.0 5/2/31	79	—	—	—	—	—	—

(a) Scale 0–10.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.(a)
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	60	60	60	60	60	60	60	60	38
January	85.4	69.1	77.3	109.8 26/40	58.8 4/93	51.0	169.0 2/37	49.9 4/93	7.6
February	84.4	68.6	76.6	105.7 21/25	58.5 23/31	47.2	165.2 6/10	49.1 22/31	7.3
March	82.2	66.4	74.3	99.4 5/19	52.4 29/13	47.0	162.5 6/39	45.4 29/13	7.0
April	78.8	61.4	70.1	95.2 (b)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	7.2
May	73.6	55.5	64.6	90.3 21/23	41.3 24/99	49.0	147.0 1/10	29.8 8/97	6.7
June	69.3	51.1	60.3	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	6.3
July	68.5	48.8	58.7	84.3 23/46	36.1 (c)	48.2	146.1 20/15	23.9 11/90	6.9
August	71.3	50.0	60.7	91.0 14/46	37.4 6/87	53.6	141.9 20/17	27.1 9/99	7.8
September	75.5	54.8	65.1	100.9 22/43	40.7 1/96	60.2	155.5 26/03	30.4 1/89	8.3
October	79.1	60.1	69.7	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	8.4
November	82.3	64.3	73.4	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	8.2
December	84.7	67.5	76.1	105.9 20/93	56.4 13/12	49.5	164.0 5/46	49.1 3/94	8.2
Year Averages ..	77.9	59.8	68.9	—	—	—	—	—	7.5
Year Extremes ..	—	—	—	109.8 26/1/40	36.1 (d)	73.7	169.0 2/1/37	23.9 11/7/90	—

(a) Mean monthly totals previously published. (b) 9/1896 and 5/1903. (c) 12/1894 and 2/1896. (d) 12/7/94 and 2/7/96.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.	60	60	60	60	95	87	94	94	94	60
January	0.642	66	79	53	6.28	13	27.72 1895	0.32 1919	18.31 21/87	0.5
February	0.648	69	82	55	6.24	13	40.39 1893	0.58 1849	10.61 6/31	0.7
March	0.614	72	85	56	5.65	15	34.04 1870	0.00 1849	11.18 14/08	1.3
April	0.517	71	80	56	3.66	12	15.28 1867	0.04 1944	5.46 5/33	2.6
May	0.424	73	85	61	2.74	10	13.85 1876	0.00 1846	5.62 9/79	3.7
June	0.356	73	84	54	2.59	8	14.03 1873	0.00 1847	6.01 9/93	3.7
July	0.327	71	81	53	2.16	8	8.46 1889	0.00 1841	3.54 (c)	3.7
August	0.345	68	80	55	1.88	7	14.67 1879	0.00 (a)	4.89 12/87	4.3
September	0.405	63	76	47	1.98	8	5.43 1886	0.10 1907	2.46 2/94	2.6
October	0.471	60	72	48	2.59	9	9.99 1882	0.14 1900	3.75 3/27	1.3
November	0.536	60	72	45	3.75	10	12.40 1917	0.00 1842	4.46 16/86	0.5
December	0.594	62	70	51	5.06	12	17.36 1942	0.35 1865	6.60 28/71	0.3
Year Totals ..	—	—	—	—	44.58	125	—	—	—	25.2
Year Averages ..	0.489	67	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	85	45	—	—	40.39 2/1893	0.00 (b)	18.31 21/1/87	—

(a) 1862, 1869, 1880. (b) Various months in various years. (c) 15/1876 and 16/1889.

CLIMATOLOGICAL DATA : SYDNEY, NEW SOUTH WALES.

LAT. 33° 52′ S., LONG. 151° 12′ E. HEIGHT ABOVE M.S.L. 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 56 feet.) Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction. 9 a.m.	Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m.(a)	No. of Clear Days.
No. of years observations.	37	80	80	27	80	80	66	87	85	36
January	29.879	9.1	26.1 3/93	63	NE	NE	5.330	4.9	5.8	4.8
February ..	29.943	8.8	29.0 12/69	61	NE	NE	4.265	4.0	5.8	5.2
March ..	30.009	7.7	31.4 20/70	58	W	ENE	3.671	3.9	5.5	5.8
April	30.067	7.3	26.7 6/82	72	W	ENE	2.661	3.6	5.1	7.0
May	30.092	7.1	28.4 6/98	63	W	SE	1.847	2.9	4.9	7.3
June	30.080	8.0	26.7 13/08	67	W	W	1.472	2.0	4.9	8.1
July ..	30.066	8.0	31.0 17/79	68	W	W	1.558	2.0	4.4	10.0
August ..	30.062	7.8	27.0 22/72	68	W	W	1.998	3.0	4.0	10.7
September ..	30.020	8.4	32.1 6/74	70	W	NE	2.747	3.7	4.3	9.4
October ..	29.979	8.8	30.9 4/72	95	W	NE	3.885	4.7	5.1	6.9
November ..	29.933	8.9	24.3 12/87	71	NE	NE	4.632	5.3	5.6	5.3
December ..	29.877	9.1	31.3 3/84	75	ENE	ENE	5.695	5.6	5.7	4.9
Year Totals ..	—	—	—	—	—	—	39.761	45.6	—	85.4
Averages	30.001	8.3	—	—	W	NE	—	—	5.4	—
Extremes	—	—	32.1 6/9/74	95	—	—	—	—	—	—

(*a*) Scale 0–10.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.). Mean Max.	Mean Min.	Mean	Extreme Shade Temperature (°Fahr.). Highest.	Lowest.	Extreme Range.	Extreme Temperature (°Fahr.). Highest in Sun.	Lowest on Grass.	Mean Daily Hours of Sunshine.(a)
No. of years over which observation extends.	88	88	88	88	88	88	83	88	26
January	78.4	65.0	71.7	113.6 14/39	51.2 14/05	62.4	164.3 26/15	43.7 6/25	7.4
February	77.8	65.0	71.4	107.8 8/20	49.3 28/63	58.5	168.3 14/39	42.8 22/33	7.2
March	75.8	63.0	69.4	102.6 3/69	48.8 14/86	53.8	158.3 10/26	39.9 17/13	6.5
April	71.4	57.9	64.7	91.4 1/36	44.6 27/64	46.8	144.1 10/77	33.3 24/09	6.1
May	65.8	52.1	58.9	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/17	5.7
June	61.3	48.2	54.7	80.4 11/31	35.7 22/32	44.7	125.5 2/23	28.0 22/32	5.5
July	60.0	46.0	53.0	78.3 22/26	35.9 12/90	42.4	124.7 19/77	24.0 4/03	6.2
August	63.1	47.6	55.3	82.8 12/46	36.8 3/72	46.0	149.0 30/78	26.1 4/09	7.0
September	67.2	51.3	59.3	92.3 27/19	40.4 19/59	51.9	142.2 12/78	30.1 17/05	7.4
October	71.2	55.8	63.5	99.4 4/42	42.2 6/27	57.2	152.2 20/33	32.7 9/05	7.4
November	74.4	59.6	67.0	104.5 6/46	43.2 7/39	61.3	158.5 28/99	36.0 6/06	7.6
December	77.1	62.9	70.0	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	7.5
Year Averages ..	70.3	56.2	63.2	—	—	—	—	—	6.8
Extremes ..	—	—	—	113.6 14/1/39	35.7 22/6/32	77.9	168.3 14/2/39	24.0 4/7/93	—

(*a*) Mean monthly totals previously published.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%) at 9 a.m. Mean.	Highest Mean.	Lowest Mean.	Rainfall (inches). Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Fog. Mean No. of Days of Fog.
No. of years over which observation extends.	71	71	71	71	88	88	88	88	88	27
January	0.541	67	78	58	3.49	13	15.26 1911	0.25 1932	7.08 13/11	0.4
February	0.560	70	81	60	3.99	13	18.56 1873	0.12 1939	8.90 25/73	0.8
March	0.532	72	85	62	4.90	14	20.52 1942	0.42 1876	11.05 28/42	2.0
April	0.442	76	87	63	5.42	13	24.49 1861	0.06 1868	7.52 29/60	3.0
May	0.359	77	90	63	5.02	14	23.03 1919	0.18 1860	8.36 28/89	4.0
June	0.301	77	89	65	4.68	12	16.30 1885	0.19 1904	5.17 16/84	3.7
July	0.276	75	88	63	4.53	12	13.21 1900	0.10 1946	7.80 7/31	3.0
August	0.288	70	84	54	2.94	11	14.89 1899	0.04 1885	5.33 2/68	2.4
September	0.330	65	79	49	2.82	11	14.05 1879	0.08 1885	5.69 10/79	0.9
October	0.383	62	77	42	2.81	12	11.14 1916	0.21 1867	6.37 13/02	0.7
November	0.444	63	79	44	2.85	12	9.88 1865	0.07 1915	4.23 19/00	0.6
December	0.503	65	77	51	2.90	13	15.82 1920	0.23 1913	4.75 13/10	0.4
Year Totals ..	—	—	—	—	46.35	150	—	—	—	21.9
Averages ..	0.400	70	—	—	—	—	—	—	—	—
Extremes ..	—	—	90	42	—	—	24.49 4/1861	0.04 8/1885	11.05 28/3/42	—

CLIMATOLOGICAL DATA : MELBOURNE, VICTORIA.

LAT. 37° 49′ S., LONG. 144° 58′ E. HEIGHT ABOVE M.S.L. 114 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 93 feet.) Average Miles per Hour. (a)	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction. 9 a.m.	Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m., 9 p.m.(b)	No. of Clear Days.
No. of years observations.	89	7	34	23	28	28	74	39	89	39
January	29.905	8.7	21.1 27/41	66	S & SW	S	6.433	1.7	5.1	6.4
February ..	29.956	8.4	17.6 26/44	66	N & S	S	5.047	2.3	5.0	6.4
March ..	30.031	8.0	16.5 (c)	66	N	S	4.052	1.6	5.4	5.3
April	30.099	7.3	19.9 16/43	67	N	S	2.426	1.2	5.9	4.3
May	30.107	7.5	20.0 4/44	72	N	N	1.512	0.5	6.4	3.1
June	30.085	7.6	18.2 3/43	60	N	N	1.138	0.3	6.7	2.5
July	30.086	8.8	27.6 28/43	68	N	N	1.116	0.3	6.4	2.7
August ..	30.059	8.2	21.3 20/42	64	N	N	1.509	0.8	6.3	2.8
September ..	30.001	8.5	17.8 5/42	68	N & W	N & S	2.340	1.1	6.1	3.2
October ..	29.971	8.0	16.3 7/12	69	N	S	3.373	1.6	6.0	3.7
November ..	29.950	8.3	16.9 22/42	65	S & SW	S	4.540	2.3	6.0	3.6
December ..	29.895	8.6	18.9 1/34	61	S & SW	S	5.786	1.9	5.5	4.3
Year Totals ..	—	—	—	—	—	—	39.272	15.6	—	48.3
Year Averages	30.012	8.2	—	—	N	S	—	—	5.9	—
Year Extremes	—	—	27.6 28/7/43	72	—	—	—	—	—	—

(a) Figures previously published taken from Anemometer 60 feet above surface (b) Scale 0–10. (c) 22/31 and 3/41.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.). Mean Max.	Mean Min.	Mean	Extreme Shade Temperature (°Fahr.). Highest.	Lowest.	Extreme Range.	Extreme Temperature (°Fahr.). Highest in Sun.	Lowest on Grass.	Mean Daily Hours of Sunshine.(a)
No. of years over which observation extends.	91	91	91	91	91	91	86	87	31
January	78.1	56.7	67.4	114.1 13/39	42.0 28/85	72.1	178.5 14/62	30.2 28/85	7.6
February	78.0	57.1	67.6	109.5 7/01	40.2 24/24	69.3	167.5 15/70	30.9 6/91	7.4
March	74.6	54.7	64.6	107.0 11/40	37.1 17/84	69.9	164.5 1/68	28.9 (b)	6.6
April	68.1	50.6	59.3	94.8 5/38	34.8 24/88	60.0	152.0 8/61	25.0 23/97	4.9
May	61.6	46.8	54.2	83.7 7/05	29.9 29/16	53.8	142.6 2/59	21.1 26/16	4.0
June	56.8	43.8	50.3	72.2 1/07	28.0 11/66	44.2	129.0 11/61	19.9 30/29	3.4
July	55.7	41.9	48.8	69.3 22/26	27.0 21/69	42.3	125.8 27/80	20.5 12/03	3.7
August	58.7	43.4	51.0	77.0 20/85	28.3 11/63	48.7	137.4 29/69	21.3 14/02	4.6
September	62.8	45.6	54.2	88.6 28/28	31.0 3/40	57.6	142.1 20/67	22.8 8/18	5.4
October	67.2	48.2	57.7	98.4 24/14	32.1 3/71	66.3	154.3 28/68	24.8 22/18	5.8
November	71.5	51.3	61.4	105.7 27/94	36.5 2/96	69.2	159.6 29/65	24.6 2/96	6.3
December	75.4	54.4	64.9	110.7 15/76	40.0 4/70	70.7	170.3 20/69	33.2 1/04	7.1
Year Averages ..	67.4	49.5	58.5	—	—	—	—	—	5.6
Year Extremes ..	—	—	—	114.1 13/1/39	27.0 21/7/69	87.1	178.5 14/1/62	19.9 30/6/29	—

(a) Mean monthly totals previously published. (b) 17/84 and 20/97.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%) at 9 a.m. Mean.	Highest Mean.	Lowest Mean.	Rainfall (inches). Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Fog. Mean No. of Days of Fog.
No. of years over which observation extends.	39	39	39	39	91	91	91	91	91	89
January	0.381	58	65	50	1.94	8	6.66 1941	0.01 1932	2.97 9/97	0.1
February	0.407	62	69	48	1.84	7	7.72 1939	0.03 1870	3.44 26/46	0.3
March	0.382	64	73	50	2.13	9	7.50 1911	0.14 1934	3.55 5/19	0.8
April	0.345	72	82	66	2.32	11	6.71 1901	0.00 1923	2.28 22/01	1.8
May	0.307	78	86	70	2.09	13	5.60 1942	0.14 1934	1.85 7/91	4.1
June	0.275	83	92	75	2.09	15	4.51 1859	0.73 1877	1.74 21/04	4.8
July	0.260	82	86	75	1.86	15	7.02 1891	0.57 1902	2.71 12/91	4.7
August	0.268	76	82	70	1.87	15	4.35 1939	0.48 1903	1.94 26/24	2.6
September	0.284	68	76	60	2.28	14	7.93 1916	0.52 1907	2.62 12/80	0.9
October	0.303	61	67	52	2.58	13	7.61 1869	0.29 1914	3.00 17/69	0.4
November	0.331	59	69	52	2.25	11	6.71 1916	0.25 1895	2.57 16/76	0.2
December	0.364	58	69	48	2.29	10	7.18 1863	0.11 1904	3.20 1/34	0.2
Year Totals ..	—	—	—	—	25.54	141	—	—	—	20.9
Year Averages ..	0.320	68	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	92	48	—	—	7.93 9/1916	0.00 4/1923	3.55 5/3/19	—

CLIMATOLOGICAL DATA : HOBART, TASMANIA.

LAT. 42° 53′ S., LONG. 147° 20′ E. HEIGHT ABOVE M.S.L. 177 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 40 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Cloud, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day.	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years observations	62	36	36	62	41	41	36	39	84	40
January	29.819	8.0	20.8 30/10	76	NNW	SE	4.785	0.9	6.1	2.1
February	29.909	7.2	25.2 4/27	63	N to NW	SE	3.687	1.0	6.0	2.1
March	29.949	6.7	21.4 13/38	68	NNW	SE	3.099	1.1	5.9	2.4
April	29.976	6.7	22.2 27/26	74	NWto NNW	SE & NW	2.002	0.6	6.2	1.7
May	29.998	6.3	20.2 20/36	70	NW to N	NW	1.373	0.3	6.1	2.2
June	29.971	6.3	23.7 27/20	64	NWto NNW	NWto NNW	0.911	0.3	6.1	2.4
July	29.934	6.6	20.8 19/35	78	NNW	NNWto NW	0.942	0.4	5.9	2.2
August ..	29.914	6.7	25.5 19/26	87	NNW	NW	1.293	0.4	6.0	2.0
September ..	29.853	8.0	21.5 26/15	74	NNW	NW	1.963	0.6	6.1	1.5
October ..	29.837	8.1	19.2 8/12	74	N to NW	SE	2.993	0.6	6.4	1.1
November ..	29.815	8.0	21.2 18/15	67	N to NW	SE	3.730	0.7	6.4	1.5
December ..	29.813	7.7	23.4 1/34	62	NWto NNW	SE	4.318	0.8	6.4	1.3
Year Totals ..	—	—	—	—	—	—	31.067	7.7	—	22.5
Year Averages	29.899	7.2	—	—	NNW	SE	—	—	6.1	—
Year Extremes	—	—	25.5 19/8/26	87	—	—	—	—	—	—

(a) Scale 0–10.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.)			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.(a)
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.*	63	63	76	78	78	78	57	79	26
January	70.3	52.7	61.9	105.0 1/00	40.1 (b)	64.9	160.0 (d)	30.6 19/97	7.7
February	70.8	53.1	62.1	104.4 12/99	39.0 20/87	65.4	165.0 24/98	28.3 —/87	7.1
March	67.7	50.9	59.3	99.1 13/40	35.2 31/26	63.9	150.9 26/44	27.5 30/02	6.4
April	62.5	47.7	55.1	84.0 17/29	33.3 24/88	50.7	142.0 18/93	25.0 —/86	4.9
May	57.6	44.0	50.7	77.8 5/21	29.2 20/02	48.6	128.0 (e)	20.0 19/02	4.5
June	52.9	41.3	46.9	69.2 1/07	27.2 28/44	38.0	122.0 12/94	21.0 6/87	4.0
July	52.4	39.9	45.8	66.1 14/34	27.7 11/95	38.4	121.0 12/93	18.7 16/86	4.3
August	55.2	41.3	48.1	71.6 28/14	30.5 (c)	41.4	129.0 —/87	20.1 7/09	5.1
September	58.7	43.2	50.9	81.7 23/26	31.0 16/07	51.7	138.0 23/93	18.3 16/26	5.8
October	62.4	45.5	54.0	92.0 24/14	32.0 12/89	60.0	156.0 9/93	23.8 (f)	6.3
November	65.6	48.2	57.1	98.3 26/37	35.0 16/41	63.1	154.0 19/92	26.0 1/08	7.3
December	68.4	51.0	60.0	105.2 30/97	38.0 3/06	67.2	161.5 10/39	27.2 —/86	7.3
Year Averages ..	62.1	46.6	54.3	—	—	—	—	—	5.9
Year Extremes ..	—	—	—	105.2 30/12/97	27.2 28/6/44	78.0	165.0 24/2/98	18.3 16/9/26	—

(a) Mean monthly totals previously published. (b) 9/37 and 11/37. (c) 4/97 and 7/09
(d) 5/86 and 13/05. (e) —/89 and —/93. (f) 1/86 and —/99.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.*	60	60	60	60	65	65	65	65	80	25
January	0.327	58	72	46	2.10	12	5.91 1893	0.17 1915	2.96 30/16	0.0
February	0.349	62	77	48	1.50	10	4.96 1935	0.11 1914	4.50 27/54	0.0
March	0.326	66	77	52	1.98	12	10.05 1946	0.29 1943	3.47 17/46	0.3
April	0.295	71	84	58	2.03	13	8.50 1935	0.07 1904	5.02 20/09	0.2
May	0.268	77	89	65	1.80	13	6.37 1905	0.14 1913	3.22 14/58	0.8
June	0.238	80	91	68	2.33	16	8.15 1889	0.28 1886	4.11 13/89	0.6
July	0.230	79	94	72	2.07	16	6.02 1922	0.51 1902	2.51 18/22	1.0
August	0.236	75	92	61	1.90	16	6.32 1946	0.30 1892	4.35 12/58	0.4
September	0.250	67	85	58	2.01	16	4.47 1928	0.40 1891	2.75 18/44	0.0
October	0.267	63	73	51	2.42	17	6.67 1906	0.39 1914	2.58 4/06	0.0
November	0.290	59	72	50	2.13	14	7.39 1885	0.33 1921	3.97 7/49	0.0
December	0.315	58	67	45	2.25	12	7.72 1916	0.17 1931	3.33 5/41	0.0
Year Totals ..	—	—	—	—	24.52	167	—	—	—	3.4
Year Averages ..	0.277	67	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	94	45	—	—	10.05 3/1946	0.07 4/1904	5.02 20/4/09	—

* Early records relating to Temperature (Mean Max., Mean Min., Extreme Shade and Extreme Range) and Rainfall have been discarded owing to the use of a faulty instrument. The number of years of observation has therefore been considerably shortened.

§ 3. Standard Times in Australia.

Prior to 1895 the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each.

In November, 1892, an intercolonial conference of surveyors was held in Melbourne to consider, among other things, the advantages of introducing the system of standard time. In this system it was proposed to make the initial meridian that of Greenwich and to change local standard time by whole hours according to the longitude east or west of that of Greenwich. Thus for every difference of 15° in longitude a change of one hour would be required. The minutes and seconds would then be identical everywhere.

To give effect to this proposal it was suggested that Australia should be divided into three zones, the standard times for which should be respectively the mean solar times of the meridians of 120°, 135° and 150° E. longitude, thus giving standard times 8, 9 and 10 hours respectively ahead of Greenwich time. It was proposed that the 120° zone should comprise Western Australia, that the 135° zone should comprise South Australia and the Northern Territory, and that the 150° zone should comprise Queensland, New South Wales, Victoria and Tasmania.

The matter was also considered by several intercolonial postal conferences, and eventually in 1894 and 1895 legislation was enacted by each of the colonies in accord with the recommendations of the Surveyors' Conference of 1892.

In 1898 the South Australian legislature amended its earlier provision, and adopted the mean solar time of the meridian 142° 30′ E. longitude as the standard time for that colony, thus reducing the difference between the standard time of Adelaide and that of the capitals of the eastern colonies from an hour to half-an-hour. Particulars concerning these enactments are as follows :—

STANDARD TIMES IN AUSTRALIA.

State.	Date when Act came into Operation.	Meridian Selected.	Time Ahead of Greenwich Hours.
New South Wales ..	1st February, 1895 ..	150° E.	10
Victoria	1st February, 1895 ..	150° E.	10
Queensland	1st January, 1895 ..	150° E.	10
South Australia ..	1st February, 1895 ..	135° E.	9
South Australia ..	1st May, 1899	142° 30′ E.	9½
Western Australia ..	1st December, 1895 ..	120° E.	8
Tasmania	1st September, 1895 ..	150° E.	10

The standard time in the Australian Capital Territory is the same as in New South Wales, and in Northern Territory the same as in South Australia.

Consequent upon the opening of the Trans-Australian Railway an arrangement was made by which the change of time between South Australia and Western Australia (namely, 1½ hours) is divided into two changes of 45 minutes each. Going east from Kalgoorlie the first change is made at Rawlinna, 235.18 miles out, where the time is put forward by 45 minutes. The second change of the same amount is made at Tarcoola, 794.05 miles out. Thenceforward South Australian standard time is kept. The Commonwealth Observatory at Mount Stromlo, Canberra, and the State Observatories at Sydney, Adelaide, and Perth derive time by astronomical observations. A Commonwealth Time Service is at present being developed.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. **General.**—A brief account of the general legislative powers of the Commonwealth and States is given in preceding issues of the Official Year Book (*see* No. 13, pp. 927–951, and No. 22, p. 64).

2. **Powers and Functions of the Governor-General and of the State Governors.**—A detailed statement of the powers and functions of the Governor-General and of the State Governors appears in preceding issues of the Official Year Book (*see* No. 18, pp. 78–80).

3. **Governor-General and State Governors.**—The present Governor-General of the Commonwealth of Australia is His Excellency the Right Honorable William John McKell, who assumed office on 11th March, 1947, in succession to His Royal Highness the Duke of Gloucester.

His Excellency Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O., as Administrator of the Government of the Commonwealth of Australia, carried out the functions of the Governor-General from 18th January, 1947, the date of the departure of His Royal Highness for England, to 11th March, 1947.

The following is a list of the Governors of the various States of Australia in office in March, 1948 :—

New South Wales ..	Lieutenant-General John Northcott, C.B., M.V.O.
Victoria	Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.
Queensland ..	Lieutenant-General Sir John Dudley Lavarack, K.B.E., C.B., C.M.G., D.S.O.
South Australia ..	Lieutenant-General Sir Charles Willoughby Moke Norrie, K.C.M.G., C.B., D.S.O., M.C.
Western Australia ..	Lieutenant-Governor—The Hon. Sir James Mitchell, G.C.M.G.
Tasmania ..	Admiral Sir Hugh Binney, K.C.B., D.S.O.

4. **The Cabinet and Executive Government.**—(i) *General.* Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (His Majesty the King, and his representative, Governor-General or Governor) should perform governmental acts on the advice of his Ministers ; that he should choose his principal

Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates by means, chiefly, of constitutional conventions, customs or understandings, and of institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

Formally, the executive power is vested in the Commonwealth in the Governor-General, and in the States in the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by the Ministers of State, meeting, without the Governor-General or Governor, under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

(ii) *The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day are alone present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, all Ministers are members of the Cabinet. As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

(iii) *The Executive Council.* This body is presided over by the Governor-General or Governor the members thereof holding office during his pleasure. All Ministers of State are *ex officio* members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings; for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form; appointments made; resignations accepted; proclamations issued, and regulations and the like approved.

(iv) *The Appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the King's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. Australian practice follows, broadly, that of the United Kingdom When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Official Year Book (*see* No. 6, p. 942). It may be added, however, that subsequent legislation has, in most of the States, obviated the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(v) *Ministers in Upper and Lower Houses.* The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in March, 1948 :—

AUSTRALIAN PARLIAMENTS : MINISTERS IN UPPER OR LOWER HOUSES, MARCH, 1948.

Ministers with Seats in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	5	2	4	(*a*)	2	2	1	16
The Lower House ..	14	14	8	10	4	8	8	66
Total ..	19	16	12	10	6	10	9	82

(*a*) Abolished in 1922.

(vi) *Ministers of State.* (*a*) *Commonwealth.* A statement showing the names of Ministers of State who have held office from the inauguration of the Commonwealth Government to 1925 will be found in Official Year Book No. 18, pp. 82 and 83. The names of the present Ministers will be found on pages 73 and 74.

(*b*) *State Ministries.* A list of the members of the Ministry in each State in March, 1948, will be found in § 3 of this Chapter.

5. **Number and Salary of Members of the Legislatures.**—The following table shows the number and annual salary of members in each of the legislative chambers in March, 1948 :—

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, MARCH, 1948.

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
NUMBER OF MEMBERS.								
Upper House ..	36	60	34	(*a*)	20	30	19	199
Lower House ..	75	90	65	62	39	50	30	411
Total ...	111	150	99	62	59	80	49	610
ANNUAL SALARY.								
	£	£	£	£	£	£	£	
Upper House ..	(*b*)1,500	..	350	(*a*)	600	(*d*)960	(*e*)370-500	.
Lower House ..	(*b*)1,500	(*c*)1,375	650	850	600	(*d*)960	(*e*)400-500	..

(*a*) Abolished in 1922. (*b*) Increased from £1,000 to £1,500 as from July, 1947. (*c*) Increased from £875 to £1,375 as from July, 1947. (*d*) Increased from £600 plus basic wage adjustment to £960 as from October, 1947, plus £50 per annum where electorate is more than 50 miles from Perth. (*e*) According to area of electorate and distance from the Capital.

The use of the expressions " Upper House " and " Lower House " in the statement above, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. **Enactments of the Parliament.**—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State

Governor acts as Viceroy as regards giving the Royal Assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States, the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. **Qualifications for Membership and for Franchise.**—The conspectus in § 4 of "General Government" in Official Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These were, in the main, applicable in 1946, but it must be remembered that Queensland abolished the Upper House in 1922, and that since 1934 the New South Wales Legislative Council has consisted of sixty members elected as required for a twelve-year term by the members of the two Houses.) It has further to be remembered that in 1925 the Commonwealth Parliament passed an Act removing the disqualification on racial grounds from (*a*) natives of British India and (*b*) persons who have become naturalized. Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted of treason, being convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract except as a member of an incorporated company of more than twenty-five persons, or being an undischarged bankrupt.

2. **The Commonwealth Government.**—The Senate consists of 36 members, six being returned by each of the original federating States. Members of this Chamber are elected for the term of six years, but by a provision in the Constitution half the members retire at the end of every third year, although they are eligible for re-election. In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as possible double that of the Senate. In the House of Representatives the States are represented on a population basis, and the numbers in March, 1948, were as follows :—New South Wales, 28 ; Victoria, 20 ; Queensland, 10 ; South Australia, 6 ; Western Australia, 5 ; Tasmania, 5 ; Northern Territory, 1—total, 75. The member representing the Northern Territory may join in the debates but is not entitled to vote, except on a motion for the disallowance of any ordinance of the Territory or on any amendment of any such motion. The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purpose of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. In both Houses members are elected by universal adult suffrage. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

3. **Commonwealth Elections.**—There have been seventeen complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914, in somewhat unusual circumstances. Under Section 57 of the Constitution, it is provided that, should the Senate fail to pass, or pass with amendments, any proposed law previously passed by the House of Representatives, and should the latter House, after an interval of three months, again pass the proposed law, with or without the amendments of the Senate, and the Senate for a second time reject it or pass it with amendments to which the lower House will not agree, then the Governor-General may dissolve the two Houses simultaneously. For the first time in the history of the Commonwealth this deadlock between the Senate and the House of Representatives occurred in the second session of the fifth Parliament, and, in accordance

with the section of the Constitution referred to above, both Houses were dissolved by the Governor-General. Until 1927 the Parliament met at Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by H.M. the King, then Duke of York, on 9th May, 1927. The first session of the eighteenth Parliament opened on 6th November, 1946. Details of the electors enrolled and of those who handed in electoral papers, and the percentages of the latter on the former are shown below for each State in respect of the 1946 election :—

COMMONWEALTH ELECTION, 28th SEPTEMBER, 1946. (*a*)

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	902,533	956,216	1,858,749	865,688	891,462	1,757,150	95.92	93.23	94.53
Victoria ..	645,186	700,351	1,345.537	613,684	647,690	1,261,374	95.12	92.48	93.75
Queensland ..	334,109	326,207	660,316	310.172	301,998	612,170	92.84	92.58	92.71
South Australia ..	203.818	216,543	420.361	195 474	203,827	399,301	95.91	94.13	94.99
Western Australia	151,872	148,465	300.337	141,968	137.098	279,066	93.48	92.34	92.92
Tasmania ..	76,675	77,878	154,553	72,874	72,006	144.880	95.04	92.46	93.74
Total ..	2,314,193	2,425,660	4,739,853	2,199,860	2,254,081	4,453,941	95.06	92.93	93.97

(*a*) All electorates contested.

As, for the first time, all electorates were contested, the numbers involved are identical respectively for both Houses. Residents of the Australian Capital Territory do not possess the right to vote, while residents of the Northern Territory elect a non-voting member (*see* above) to the House of Representatives, but have no Senate representative. The figures in the accompanying tables exclude particulars of Northern Territory. The number of electors enrolled there in 1946 was 4,164 and the number of voters 3,053. Particulars regarding Commonwealth elections since 1931 are shown in the following table :—

COMMONWEALTH ELECTIONS.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
THE SENATE.									
19.12.1931	1,827,079	1,822,875	3,649,954	1,741,163	1,727,140	3,468,303	95.30	94.75	95.02
15.9.1934	1,954,339	1,948,338	3,902,677	1,862,749	1,845,829	3,708,578	95.31	94.74	95.03
23.10.1937	2,043,212	2,036,826	4,080,038	1,963,979	1,957,358	3,921,337	96.12	96.10	96.11
21.9.1940	2,113,169	2,126,177	4,239,346	1,989,381	2,027,422	4,016,803	94.14	95.36	94.75
21.8.1943	2,164,648	2,301,989	4,466,637	2,132,225*a*	2,169,430*a*	4,301,655*a*	98.50*a*	94.24*a*	96.31*a*
28.9.1946*b*	2,314,193	2,425,660	4,739,853	2,199,860	2,254,081	4,453,941	95.06	92.93	93.97
THE HOUSE OF REPRESENTATIVES. (CONTESTED ELECTORATES.)									
19.12.1931	1,724,730	1,733,343	3,458,073	1,643,604	1,642.870	3,286,474	95.30	94.78	95.04
15.9.1934	1,930,418	1,934,021	3,864,439	1,843,949	1,833 774	3,677,723	95.52	94.82	95.17
23.10.1937	1,928,786	1,919,234	3,848,020	1,854,770	1,844,499	3,699,269	96.16	96.11	96.13
21.9.1940	2,087,003	2,109,443	4,196,446	1,966,744	2,012,265	3,979,009	94.24	95.39	94.82
21.8.1943	2,134,547	2,272,960	4,407,507	2,103,636*a*	2,141,733*a*	4,245,369*a*	98.55*a*	94.23*a*	96.32*a*
28.9.1946*b*	2,314.193	2,425,660	4,739,853	2,199,860	2,254,081	4,453,941	95.06	92.93	93.97

(*a*) Includes members of Forces not enrolled. (*b*) All electorates contested, hence numbers identical with those for Senate.

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901. Compulsory voting was introduced prior to the election in 1925, and an exceedingly heavy vote (over 91 per cent.) was cast in that year. This high percentage has been exceeded appreciably at subsequent elections, increasing in 1943 to 96.3 per cent. for both Houses. In the 1946 election it dropped to 94.0 per cent.

For the first time two women were elected to the Commonwealth Parliament in 1943. one to the Senate and the other to the House of Representatives. A further woman was elected to the Senate in 1946.

Under the Commonwealth Electoral (War-time) Act 1940 the franchise was extended to adult members of the forces who were or had been on active service outside Australia. Persons thus benefited comprised those then serving outside Australia, and those who had returned but were not enrolled. An amending Act of 1943 removed the limitation " outside Australia " from the general active service requirement, but extended the franchise to members of the forces under 21 who were serving or had served outside Australia, and to discharged persons not enrolled including those under 21 with service outside Australia. A 1944 amendment permitted certain accredited non-combatant persons to vote as members of the forces, but limited the application of the Act to British subjects.

Provision for voting in State elections also by service personnel was made in the several States.

4. **Commonwealth Referenda.**—(i) *General.* According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted, before it can be presented for Royal assent. So far twenty-two proposals have been submitted to referenda and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referenda and the voting thereon were given in previous issues of the Official Year Book (*see* No. 18, p. 87, No. 31, p. 67, No. 35, pp. 60 and 961 and No. 36, p. 61).

(ii) *Post-war Reconstruction and Democratic Rights Referendum,* 1944. A Convention of representatives of Commonwealth and States Parliaments to consider the reference of powers by the States to the Commonwealth met at Canberra from 24th November to 2nd December, 1942 and adopted a resolution that adequate powers to make laws in relation to post-war reconstruction should be referred by the States to the Commonwealth for a period ending at the expiration of five years after the war, and finally approved of a draft bill (*see* page 62 of the Official Year Book No. 35 for full text) which was passed in the agreed form in only two States, viz. :—New South Wales and Queensland.

Following this failure to obtain the approval of all State Parliaments to the draft Bill agreed to at the Canberra Convention, the Commonwealth Government decided to submit the question of transfer of powers to a Referendum in accordance with section 128 of the Commonwealth Constitution (see *supra*, p. 25) and the bill for this purpose—the full text of which may be found on pages 64 to 66 of Official Year Book No. 35—was passed by an absolute majority of the members of both Houses of Parliament and submitted to the people at a Referendum on 19th August, 1944. Only two States—South Australia and Western Australia—were in favour of the proposed alteration.

(iii) *Social Services, Organized Marketing of Primary Products and Industrial Employment Referendum,* 1946. On 19th November, 1945, the High Court of Australia, in deciding an action brought by the Attorney-General of Victoria against the Commonwealth, declared that the Pharmaceutical Benefits Act 1944–1945 was *ultra vires* and void. This Act was designed to make available to all residents of the Commonwealth pharmaceutical benefits, without payment of price, after obtaining prescriptions from doctors. Following the decision of the High Court, the Commonwealth Cabinet sought the opinion of eminent constitutional lawyers regarding the validity, which now appeared doubtful, of a number of Commonwealth acts relating to social services. Consideration of the opinions obtained convinced the Government of the necessity for an amendment to the Constitution, in order to authorize the continuance of acts providing existing benefits in the nature of social services and to authorize the obtaining of similar benefits in the future. Accordingly, a bill was introduced on 26th March, 1946, to alter the Constitution by empowering the Parliament to make laws for the provision of maternity allowances, widows' pensions, child endowment, unemployment, sickness and hospital benefits, medical and dental services, benefits to students and family allowances. At the same time bills were introduced to empower Parliament to legislate for the organized marketing of primary products, unrestricted by section ninety-two (freedom of interstate trade) of the Constitution, and to legislate with respect to terms and conditions of employment in industry. During the war the organization of the marketing of primary produce had been handled, under Defence powers, by the Commonwealth Government, and it was desired to extend this practice to peace-time. The intention of the industrial employment bill was to enable the Parliament to regulate, either directly or indirectly, the terms and conditions of employment in industry on a nation-wide basis. Such powers were already possessed by the respective State Governments. After the three bills had passed the two Houses of Parliament in the required manner, they were submitted to the electors of the Commonwealth at a referendum conducted concurrently with the general election on 28th September, 1946. The majority of voters in the Commonwealth were in favour of the proposed amendments, but for one only—social services—was the other necessary condition, a majority in most States, fulfilled. Detailed results of the voting on each proposal are shown in the table below :—

SOCIAL SERVICES, ORGANIZED MARKETING OF PRIMARY PRODUCTS AND INDUSTRIAL EMPLOYMENT REFERENDUM, 28th SEPTEMBER, 1946.

State.	Social Services.			Organized Marketing of Primary Products.			Industrial Employment.			Total.
	Yes.	No.	Informal.	Yes.	No.	Informal.	Yes.	No.	Informal.	
N.S. Wales ..	897,887	764,723	94,540	855,23	794,852	107,065	833,822	778,280	145,048	1,757,150
Victoria ..	671,967	528,452	60,955	624,34	567,800	69,171	609.355	560,773	91,246	1,261,374
Queensland ..	299,205	284,465	28.500	251,67	323,678	36,820	243.242	316,970	51,958	612,170
S. Australia ..	197,395	184,172	17,734	183,67	193,201	22,426	179,153	192,516	27,632	399.301
W. Australia ..	164,017	99,412	15,637	145.78	113,562	19,723	142,18	112,881	23,999	279,066
Tasmania ..	67,463	65,924	11,493	55,561	75,018	14,301	52,517	74.440	17,923	144,880
Total ..	2,297,934	1,927,148	228,859	2,116,264	2,068,171	269,506	2,060,27	2,035,860	357,806	4,453,941
Percentage (*a*)	54·39	45·61	..	50.56	49·44	..	50·3	49·70	..	100.0

(*a*) Excludes informal votes.

Consequent on obtaining the approval of the electors, the Constitution Alteration (Social Services) Act 1946 was assented to on 19th December, 1946. Section fifty-one (powers of the Parliament) of the Constitution is thereby altered by the insertion, after paragraph (xxiii), invalid and old-age pensions, of the following paragraph :—

> "(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances."

5. **Parliamentary Proceedings Broadcasting Act 1946.**—On 5th July, 1946, an Act to provide for the broadcasting, by the Australian Broadcasting Commission, of the proceedings of the Senate or of the House of Representatives was assented to. The Act provides also for the appointment of a Joint Committee on the Broadcasting of Parliamentary Proceedings, to determine the days and periods of broadcasting in accordance with general principles previously arrived at, and to determine the conditions governing the re-broadcasting of proceedings. The first broadcast of proceedings took place on 10th July, 1946, the subject of debate being the second reading of the Overseas Telecommunications Bill.

6. The Parliament of New South Wales.—(i) *Constitution.* The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. The Assembly consists of ninety members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years. Until 1934 the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934, it was reconstituted and became a House of sixty members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. The electorate comprises members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers. At the first elections in 1933, four groups of fifteen members were elected to serve respectively twelve years, nine years, six years, and three years. Any person resident for at least three years in Australia and entitled to vote at the election of members of the Legislative Assembly is eligible for election as a member of the Council, if nominated by two electors, an elector being a member of either of the two Houses for the time being.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been thirty-four complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-fourth was dissolved on 29th March, 1947. The thirty-fifth Parliament opened on 28th May, 1947. The elections of 1920, 1922 and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at the later appeals to the people. Particulars of voting at elections from 1932 to 1947 are given below :—

NEW SOUTH WALES LEGISLATIVE ASSEMBLY ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1932	739,009	725,999	1,465,008	690,094	676,993	1,367,087	96.42	96.37	96.39
1935	769,220	759,493	1,528,713	654,383	640,369	1.294,752	96.09	95.60	95.85
1938	803,517	804,316	1,607,833	608,727	606,767	1,215,494	96.15	95.41	95.78
1941	834,752	850,029	1,684,781	698,100	727,652	1,425,752	90.99	94.03	92.52
1944*a*	833,300	899,406	1,732,706	610,904	699,368	1,310,272	81.62	92.85	87.47
1947	903,138	949,649	1,852,787	794,908	826,622	1,621,530	95.40	93.68	94.51

(*a*) Service and Section votes omitted in percentage calculations.

The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election and the percentage of electors who voted in contested electorates rose from 82.54 in 1927 to over 96 in 1932, but declined to 87 in 1944.

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised by them for the first time in 1904.

(iii) *Legislative Assembly Members Pensions Act* 1946. This Act provides for a Provident Fund for the purpose of paying pensions to persons who, after the commencement of the Act, cease to be Members of the Legislative Assembly. In the case of those who have served an aggregate of fifteen years or more the pension is £6 per week, and for those without this qualification, but who have been members in any three Parliaments, the pension is £5 per week. Provision is also made for the payment of £3 per week to widows of members with the necessary qualifications, or to widows of former members on pension. Persons ceasing to be members and who have not the qualifications for a pension, or their widows, are entitled to a refund of all contributions. Contributions are deducted from members' salaries at the rate of £78 per annum.

(iv) *Referendum on Closing Hour for Licensed Premises and Registered Clubs.* At a referendum, held on 15th February, 1947, submitting the closing hours of 6 p.m., 9 p.m. and 10 p.m. to the electors, the voting resulted in 1,051,260 in favour of 6 p.m., 604,833 for 10 p.m. and 26,954 for 9 p.m.

7. **The Parliament of Victoria.**—(i) *Constitution.* Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House is thirty-four, and in the Lower House, sixty-five. In the Legislative Council the tenure of the seat is for six years, but one member for each of the seventeen provinces retires every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years. Single voting is observed in elections held for either House, plurality of voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937; for the latter House, however, it is still possible for an elector to be enrolled for more than one province, and such elector may select the province for which he desires to record his vote. A preferential system of voting (see Official Year Book No. 6, p. 1182) was adopted for the first time in Victoria at the election held in November, 1911. Compulsory voting was first observed at the 1927 elections for the Legislative Assembly, and at the 1937 elections for the Legislative Council.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been thirty-six complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-sixth was dissolved on 9th October, 1947. The thirty-seventh Parliament was opened on 2nd December, 1947. Particulars of voting at elections during the years 1931 to 1947 are given in the following table :—

VICTORIAN ELECTIONS.

LEGISLATIVE COUNCIL.

Year.	Electors Enrolled—Whole State.	Contested Electorates.		
		Electors Enrolled.	Electors who Voted.	Percentage of Electors who Voted.
1931	470,349	239,975	93,244	38.86
1934	469,395	160,980	47,375	29.43
1937	447,694	265,194	208,925	78.78
1940	471,843	235,784	178,666	75.78
1943	465,637	117,584	83,568	71.07
1946	517,719	393,907	291,295	73.95

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1932	510,809	544,492	1,055,301	335,512	351,530	687,042	94.60	93.82	94.20
1935	532,619	566,632	1,099,251	415,081	438,389	853,470	95.00	93.82	94.39
1937	550,618	585,978	1,136,596	383,507	413,923	797,430	94.22	93.72	93.96
1940	565,002	597,965	1,162,967	377,644	408,715	786,359	93.65	93.19	93.41
1943	596,595	665,035	1,261,630	392,160	491,519	883,679	81.87	91.57	87.00
1945	594,761	682,188	1,276,949	408,671	487,890	896,561	85.75	89.93	87.98
1947	645,342	700,188	1,345,530	585,028	621,787	1,206,815	94.44	92.52	93.44

The franchise was extended to women by the Adult Suffrage Act 1908, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

(iii) *Parliamentary Contributory Retirement Fund Act* 1946. Under this Act provision is made for the establishment of a fund for the payment of pensions, retiring allowances etc., to persons who cease to be Members of Parliament after the commencement of the Act and to certain others. Those who have served as members for an aggregate of fifteen years or more are entitled to a pension at the rate of the basic wage for Melbourne. Under certain conditions persons without this qualification of fifteen years' service, but who have been members in at least three consecutive Parliaments, are also entitled to the pension. Certain other allowances and payments are prescribed in respect of the retirement or death of members not qualified for pensions. Widows of persons receiving pensions, or of those qualified for them, will be paid two-thirds of the pension originally paid, or due. The fund will be financed by deductions from members' salaries at the rate of £1 per fortnight, and, as necessary, by payments from Consolidated Revenue Fund.

8. **The Parliament of Queensland.**—(i) *Constitution.* As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of sixty-two members, and the State is divided into that number of electoral districts. The Electoral Districts Act of 1931, assented to on 1st October, 1931, provided that from and after the end of the twenty-fifth Parliament (dissolved on 19th April, 1932) the number of members and electoral districts should be reduced from seventy-two to sixty-two. Preferential voting has been abolished and the system of election of the candidate obtaining the highest number of votes in the electorate now operates.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been thirty complete Parliaments, the last of which was dissolved on 21st March, 1947. Opinions differ regarding the opening date of the first Queensland Parliament. According to the Votes and Proceedings of the Legislative Assembly the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date. but he duly attended on 29th May, 1860, and delivered the Opening Address.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the number of electors enrolled at the 1944 elections, 87.55 per cent. went to the polls. Statistics regarding elections during the years 1932 to 1947 are given below :—

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total
1932	274,986	250,958	525,944	236,266	220,628	456,894	92.59	93.14	92.86
1935	303,018	272,270	575,288	245,331	225,427	470,758	92.55	92.89	92.71
1938	318,402	288,157	606,559	280,841	258,196	539,037	92.09	92.97	92.51
1941	331,285	303,631	634,916	269,849	259,398	529,247	88.68	92.03	90.29
1944	329,028	326,956	655,984	251,119	261,662	512,781	85.62	89.48	87.55
1947(a)	357,083	340,322	697,405	324,869	308,040	632,909	90.98	90.51	90.75

(a) All electorates contested.

The election of 1907 was the first State election in Queensland at which women voted. the right being conferred under the Elections Acts Amendment Act 1905.

9. **The Parliament of South Australia.**—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with thirty-nine members, both Chambers being elective. For the Legislative Council the State is divided into five districts each returning four members two of whom retire alternately. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were forty-six members representing nineteen districts. A system of preferential voting is in operation.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been thirty-one complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-first Parliament was opened on 20th July, 1944, and was dissolved on 28th February, 1947. The thirty-second Parliament was opened on 26th June, 1947. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to. Particulars of voting at the last six elections are given below :—

SOUTH AUSTRALIAN ELECTIONS.

Legislative Council.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1930*b*	(*a*)	(*a*)	133,274	(*a*)	(*a*)	100,040	(*a*)	(*a*)	75.06
1933	(*a*)	(*a*)	133,152	(*a*)	(*a*)	25,309	(*a*)	(*a*)	64.21
1938*b*	92,109	37,026	129,135	67,691	23,474	91,165	73.49	63.40	70.60
1941	(*a*)	(*a*)	133,358	(*a*)	(*a*)	70,660	(*a*)	(*a*)	60.94
1944	(*a*)	(*a*)	142,314	(*a*)	(*a*)	81,791	(*a*)	(*a*)	83.05
1947*b*	(*a*)	(*a*)	155,847	(*a*)	(*a*)	124,826	(*a*)	(*a*)	80.10

(*a*) Not available. (*b*) All electorates contested.

House of Assembly.

1930	(*a*)	(*a*)	325,244	(*a*)	(*a*)	222,819	(*a*)	(*a*)	71.36
1933	(*a*)	(*a*)	338,576	(*a*)	(*a*)	182,693	(*a*)	(*a*)	59.45
1938	(*a*)	(*a*)	364,884	(*a*)	(*a*)	223,136	(*a*)	(*a*)	63.31
1941	(*a*)	(*a*)	378,265	(*a*)	(*a*)	171,978	(*a*)	(*a*)	50.69
1944	(*a*)	(*a*)	401,747	(*a*)	(*a*)	255,883	(*a*)	(*a*)	88.53
1947	(*a*)	(*a*)	418,308	(*a*)	(*a*)	285,765	(*a*)	(*a*)	93.37

(*a*) Not available.

South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly, provided for by the Electoral Act Amendment Act 1942, was first observed at the 1944 election.

10. **The Parliament of Western Australia.**—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are thirty members, each of the ten provinces returning three members, one of whom retires biennially. At each biennial election the member elected holds office for a term of six years, and automatically

retires at the end of that period. The Legislative Assembly is composed of fifty members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been eighteen complete Parliaments, the first of which was opened on 30th December, 1890. The eighteenth Parliament was opened on 27th July, 1944, and expired on 31st January, 1947. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184. Elections for membership of both Houses, which were due to be held early in 1942, were postponed by the Legislative Council Postponement of Elections Act 1942 and the Legislative Assembly Duration and General Elections Postponement Act 1941. Particulars of voting at the last six elections for each Chamber are given in the tables following :—

WESTERN AUSTRALIAN ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
				LEGISLATIVE COUNCIL.					
1934	62,168	22,323	84,491	31,590	10,189	41,779	53.39	47.23	51.75
1936	63,407	21,987	85,394	18,479	6,394	24,873	45.03	40.03	43.62
1938	62,992	23,419	86,411	19,132	6,971	26,103	52.64	45.57	50.54
1940	62,745	23,598	86,343	24,904	8,013	32,917	41.96	35.29	40.11
1944	56,021	23,868	79,889	17,564	5,453	23,017	50.88	45.46	49.48
1946	61,599	26,284	87,883	12,204	3,799	16,003	45.18	41.18	44.16
				LEGISLATIVE ASSEMBLY.					
1930	122,576	107,500	230,076	75,206	63,807	139,013	75.44	73.30	74.44
1933	124,776	112,419	237,195	96,210	89,802	186,012	90.23	91.00	90.60
1936	130,065	117,400	247,465	71,734	64,575	136,309	71.95	68.22	70.13
1939	138,240	127,747	265,987	104,228	101,510	205,738	89.01	91.07	90.01
1943	137,100	137,756	274,856	70,766	94,537	*a*183,781	67.96	87.33	*a*86.53
1947	150,176	146,913	297,089	83,270	83,067	*b*166,904	85.65	85.60	*b*85.91

(*a*) Includes 18,478 members of Forces not enrolled. (*b*) Includes 567 members of Forces not enrolled.

Women's suffrage was granted by the Electoral Act of 1899. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939, when the percentage of electors who voted in contested electorates rose from 70.13 to 90.01. The high percentage of 90.60 in 1933 was due to the fact that the Secession Referendum, in respect of which voting was compulsory, was taken on the Legislative Assembly election day.

(iii) *Secession Referendum.* On 8th April, 1933, the people of Western Australia voted overwhelmingly in favour of the State withdrawing from the Federal Commonwealth, the voting being :—In favour 138,653 ; not in favour, 70,706.

(iv) *Members of Parliament Fund Act* 1941–1944. In 1941 an act was passed providing for the establishment of a fund to pay a lump sum of £600 to a member of either House of Parliament upon loss of membership after at least seven years' service, or to his dependants. Where a member has not served at least seven years, provision is made for the repayment of double the amount contributed. The fund is financed by deductions of £24 per annum from each member's allowance. The amended Act 1944 provides for its operation from 1st July, 1944. A member's service dates from the commencement of the Act, but provision is made for the payment of a lump sum proportionate to any selected period of prior membership, entitling the member to benefit as if the selected period had been served subsequently.

11. **The Parliament of Tasmania.**—(i) *Constitution.* In Tasmania there are two legislative Chambers—the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the Constitution Act 1946, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. Prior to the 1946 Act there were eighteen members elected from fifteen divisions, of which Hobart returned three members and Launceston two. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (see Official Year Book No. 6, p. 1185). The life of the Assembly was extended from three to five years by the Constitution Act 1936.

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been twenty-seven complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last six elections for the House of Assembly are given hereunder :—

TASMANIAN HOUSE OF ASSEMBLY ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1928	55,058	56,898	111,956	46,769	44,910	91,679	84.94	78.94	81.90
1931	59,024	59,706	118,730	56,674	56,105	112,779	96.02	93.97	94.99
1934	63,841	63,840	127,681	60,623	59,999	120,622	94.96	93.98	94.47
1937	66,223	65,778	132,001	62,880	61,580	124,460	94.95	93.62	94.29
1941	69,058	70,176	139,234	61,480	65,554	127,034	89.03	93.41	91.24
1946	78,420	79,336	157,756	71,414	72,260	143,674	91.07	91.08	91.07

The present members of the Legislative Council have been elected at various dates and the following particulars are given of the last contested elections in three divisions in 1946 :—Number of electors on the roll, 15,796 ; number of votes recorded, 12,100; percentage of enrolled electors who voted, 76.60.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting came into force on the passing of the Electoral Act in 1928.

§ 3. Administration and Legislation.

1. **The Commonwealth Parliaments.**—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by his Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King, the Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., being Prime Minister.

The following table gives the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	9th May, 1901	23rd November, 1903
Second	2nd March, 1904	5th November, 1906
Third	20th February, 1907	19th February, 1910
Fourth	1st July, 1910	23rd April, 1913
Fifth	9th July, 1913	30th July, 1914(*a*)
Sixth	8th October, 1914	26th March, 1917
Seventh	14th June, 1917	3rd November, 1919
Eighth	26th February, 1920	6th November, 1922
Ninth	28th February, 1923	3rd October, 1925
Tenth	13th January, 1926	9th October, 1928
Eleventh	9th February, 1929	16th September, 1929
Twelfth	20th November, 1929	27th November, 1931
Thirteenth	17th February, 1932	7th August, 1934
Fourteenth	23rd October, 1934	21st September, 1937
Fifteenth	30th November, 1937	27th August, 1940
Sixteenth	20th November, 1940	7th July, 1943
Seventeenth	23rd September, 1943	16th August, 1946
Eighteenth	6th November, 1946	.. ..

(*a*) On this occasion, the Governor-General, acting on the advice of the Ministry, and under Section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the only occasion on which a dissolution of both Houses has occurred.

2. **Governors-General and Ministries.**—The following statements show the names of the several Governors-General, and the Ministries which have directed the administration of the affairs of the Commonwealth since its inception :—

(*a*) Governors-General.

Rt. Hon. Earl of Hopetoun (afterwards Marquis of Linlithgow), K.T., G.C.M.G., G.C.V.O. From 1st January, 1901, to 9th January, 1903.

Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. From 17th July, 1902, to 9th January, 1903, (Acting).

Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. From 9th January, 1903, to 21st January, 1904

Rt. Hon. Henry Stafford, Baron Northcote, G.C.M.G., G.C.I.E., C.B. From 21st January, 1904, to 9th September, 1908.

Rt. Hon. William Humble, Earl of Dudley, G.C.B., G.C.M.G., G.C.V.O. From 9th September 1908, to 31st July, 1911.

Rt. Hon. Thomas, Baron Denman, G.C.M.G., K.C.V.O. From 31st July, 1911, to 18th May, 1914

Rt. Hon. Sir Ronald Craufurd Munro Ferguson (afterwards Viscount Novar of Raith), G.C.M.G. From 18th May, 1914, to 6th October, 1920.

Rt. Hon. Henry William, Baron Forster of Lepe, G.C.M.G. From 6th October, 1920, to 8th October, 1925.

Rt. Hon. John Lawrence, Baron Stonehaven, G.C.M.G., D.S.O. From 8th October 1925, to 22nd January, 1931.

Lieut-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C From 3rd October, 1930, to 22nd January, 1931 (Acting).

Rt. Hon. Sir Isaac Alfred Isaacs, G.C.B., G.C.M.G. From 22nd January, 1931, to 23rd January 1936.

General the Rt. Hon. Alexander Gore Arkwright, Baron Gowrie, V.C., G.C.M.G., C.B D.S.O. From 23rd January, 1936, to 30th January, 1945.

Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O. From 5th September, 1944 to 30th January, 1945 (Acting).

His Royal Highness Prince Henry William Frederick Albert, Duke of Gloucester, Earl of Ulster and Baron Culloden, K.G., K.T., K.P., P.C., G.M.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945, to 11th March, 1947.

Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O. From 18th January, 1947, to 11th March, 1947 (Acting).

Rt. Hon. William John McKell. From 11th March, 1947.

(*b*) Ministries.

(i) Barton Ministry, 1st January, 1901, to 24th September, 1903.
(ii) Deakin Ministry, 24th September, 1903, to 27th April, 1904.
(iii) Watson Ministry, 27th April, 1904, to 17th August, 1904.
(iv) Reid-McLean Ministry, 18th August, 1904, to 5th July, 1905.
(v) Deakin Ministry, 5th July, 1905, to 13th November, 1908.
(vi) Fisher Ministry, 13th November, 1908, to 1st June, 1909.
(vii) Deakin Ministry, 2nd June, 1909, to 29th April, 1910.
(viii) Fisher Ministry, 29th April, 1910, to 24th June, 1913.
(ix) Cook Ministry, 24th June, 1913, to 17th September, 1914.
(x) Fisher Ministry, 17th September, 1914, to 27th October, 1915.
(xi) Hughes Ministry, 27th October, 1915, to 14th November, 1916.
(xii) Hughes Ministry, 14th November, 1916, to 17th February, 1917.
(xiii) Hughes Ministry, 17th February, 1917, to 10th January, 1918.
(xiv) Hughes Ministry, 10th January, 1918, to 9th February, 1923.
(xv) Bruce-Page Ministry, 9th February, 1923, to 22nd October, 1929.
(xvi) Scullin Ministry, 22nd October, 1929, to 6th January, 1932.
(xvii) Lyons Ministry, 6th January, 1932, to 7th November, 1938.
(xviii) Lyons Ministry, 7th November, 1938, to 7th April, 1939.
(xix) Page Ministry, 7th April, 1939, to 26th April, 1939.
(xx) Menzies Ministry, 26th April, 1939, to 14th March, 1940.
(xxi) Menzies Ministry, 14th March, 1940, to 29th August, 1941.
(xxii) Fadden Ministry, 29th August, 1941, to 7th October, 1941.
(xxiii) Curtin Ministry, 7th October, 1941, to 21st September, 1943.
(xxiv) Curtin Ministry, 21st September, 1943, to 6th July, 1945.
(xxv) Forde Ministry, 6th July, 1945, to 13th July, 1945.
(xxvi) Chifley Ministry, 13th July, 1945, to 1st November, 1946.
(xxvii) Chifley Ministry, 1st November, 1946.

(*c*) Chifley Government (sworn in 1st November, 1946), as at 31st March, 1948.

(The State from which each Minister was elected to Parliament is added in brackets.)

Departments.	Ministers.
Prime Minister and Treasurer	*Rt. Hon. J. B. Chifley* (*N.S.W.*).
Attorney-General and Minister for External Affairs	*Rt. Hon. H. V. Evatt, LL.D., D.Litt., K.C.* (*N.S.W.*).
Minister for Labour and National Service	*Hon. E. J. Holloway* (*Vic.*).
Minister for Air and Minister for Civil Aviation	*Hon. A. S. Drakeford* (*Vic.*).
Vice-President of the Executive Council	*Hon. W. J. Scully* (*N.S.W.*).
Minister for Supply and Shipping	*Senator The Hon. W. P. Ashley* (*N.S.W.*).
Minister for Defence, Minister for Post-war Reconstruction, and Minister in charge of the Council for Scientific and Industrial Research	*Hon. J. J. Dedman* (*Vic.*).
Minister for Transport and Minister for External Territories	*Hon. E. J. Ward* (*N.S.W.*).
Postmaster-General	*Senator The Hon. D. Cameron* (*Vic.*).
Minister for Information and Minister for Immigration	*Hon. A. A. Calwell* (*Vic.*).
Minister for the Interior	*Hon. H. V. Johnson* (*W.A.*).
Minister for Health and Minister for Social Services	*Senator The Hon. N. E. McKenna* (*Tas.*).
Minister for Commerce and Agriculture	*Hon. R. T. Pollard* (*Vic.*).
Minister for Works and Housing	*Hon. N. Lemmon* (*W.A.*).

(c) CHIFLEY GOVERNMENT—*continued.*

DEPARTMENTS.	MINISTERS.
Minister for Munitions	*Senator The Hon. J. I. Armstrong (N.S.W.).*
Minister for the Army	*Hon. C. Chambers (S.A.).*
Minister for Trade and Customs	*Senator The Hon. B. Courtice (Qld.).*
Minister for the Navy	*Hon. W. J. F. Riordan (Qld.).*
Minister for Repatriation	*Hon. H. C. Barnard (Tas.).*

3. **State Ministers.**—The names of the members of the Ministries in each State in March, 1948 are shown in the following statement. The date on which each Ministry was sworn in is stated in parenthesis :—

STATE MINISTERS, 1948.

NEW SOUTH WALES (19th May, 1947).

Premier and Colonial Treasurer—
THE HON. J. MCGIRR.

Deputy Premier, Colonial Secretary, Secretary for Mines and Minister for National Emergency Services—
THE HON. J. M. BADDELEY.

Minister for Housing and Assistant Treasurer—
THE HON. C. R. EVATT, K.C.

Minister for Education—
THE HON. R. J. HEFFRON.

Attorney-General—
THE HON. C. E. MARTIN.

Minister for Labour and Industry and Minister for Social Welfare—
THE HON. F. J. FINNAN.

Minister of Justice and Vice-President of the Executive Council—
THE HON. R. R. DOWNING, M.L.C.

Secretary for Public Works and Minister for Local Government—
THE HON. J. J. CAHILL.

Minister for Health—
THE HON. C. A. KELLY.

Minister for Transport—
THE HON. M. O'SULLIVAN.

Minister for Agriculture—
THE HON. E. H. GRAHAM.

Minister for Conservation—
THE HON. G. WEIR.

Minister in Charge of Tourist Activities and Immigration—
THE HON. C. H. MATTHEWS.

Secretary for Lands—
THE HON. W. F. SHEAHAN.

Minister for Building Materials—
THE HON. W. E. DICKSON, M.L.C.

VICTORIA (20th November, 1947).

Premier and Treasurer—
THE HON. T. T. HOLLWAY.

President of the Board of Land and Works, Commissioner of Crown Lands and Survey, Minister of Water Supply, and Minister of Soldier Settlement—
THE HON. J. G. B. MCDONALD.

Minister of Transport, Minister of Public Instruction, and a Vice-President of the Board of Land and Works—
COLONEL THE HON. W. S. KENT HUGHES, M.V.O., O.B.E., M.C., E.D.

Chief Secretary—
THE HON. K. DODGSHUN.

Attorney-General and Solicitor-General—
THE HON. T. D. OLDHAM.

Minister of Health—
THE HON. A. A. DUNSTAN.

Minister of Agriculture, Minister of Forests, and a Vice-President of the Board of Land and Works—
LIEUT.-COLONEL THE HON. A. H. DENNETT.

Commissioner of Public Works and a Vice-President of the Board of Land and Works—
THE HON. J. A. KENNEDY, M.L.C.

Minister in Charge of Electrical Undertakings and Minister of Mines—
THE HON. J. H. LIENHOP, M.L.C.

Minister of Labour and Minister in Charge of State Development—
THE HON. H. J. T. HYLAND.

Minister in Charge of Materials and Minister in Charge of Housing—
THE HON. A. G. WARNER, M.L.C.

Minister without Portfolio—
THE HON. P. T. BYRNES, M.L.C.

STATE MINISTERS—*continued.*

QUEENSLAND (15th May, 1947).

Premier and Chief Secretary; and Vice-President of the Executive Council—
The Hon. E. M. Hanlon.

Secretary for Labour and Industry—
The Hon. V. C. Gair.

Secretary for Agriculture and Stock—
The Hon. H. H. Collins.

Secretary for Public Lands and Secretary for Mines—
The Hon. T. A. Foley.

Secretary for Health and Home Affairs—
The Hon. A. Jones.

Attorney-General—
The Hon. D. A. Gledson.

Treasurer—
The Hon. J. Larcombe.

Secretary for Public Instruction—
The Hon. H. A. Bruce.

Minister for Transport—
The Hon. J. E. Duggan.

Secretary for Public Works, Housing and Local Government—
The Hon. W. Power.

SOUTH AUSTRALIA (15th May, 1944).

Premier, Treasurer, Minister of Immigration and Minister of Industry and Employment—
The Hon. T. Playford.

Chief Secretary, Minister of Health, and Minister of Mines—
The Hon. A. L. McEwin, M.L.C.

Attorney-General and Minister of Education—
The Hon. R. J. Rudall, M.L.C.

Minister of Lands, Minister of Repatriation, and Minister of Irrigation—
The Hon. C. S. Hincks.

Minister of Works, Minister of Railways, Minister of Marine, and Minister of Local Government—
The Hon. M. McIntosh.

Minister of Agriculture and Minister of Forests—
The Hon. Sir George Jenkins, K.B.E.

WESTERN AUSTRALIA (1st April, 1947).

Premier, Treasurer, Minister for Housing, Forests and North-west—
The Hon. D. R. McLarty.

Minister for Education, Local Government and Industrial Development—
The Hon. A. F. Watts.

Attorney-General, Minister for Police and Native Affairs—
The Hon. R. R. McDonald.

Minister for Lands, Agriculture and Labour—
The Hon. L. Thorn.

Minister for Mines and Health—
The Hon. H. S. W. Parker, M.L.C.

Minister for Works and Water Supply—
The Hon. V. Doney.

Chief Secretary and Minister for Fisheries—
The Hon. A. V. R. Abbot.

Minister for Railways and Transport—
The Hon. H. S. Seward.

Honorary Ministers—
The Hon. A. F. G. Cardell-Oliver.
The Hon. G. B. Wood, M.L.C.

TASMANIA (25th February, 1948).

Premier and Minister for Education—
The Hon. R. Cosgrove.

Treasurer and Minister for Transport—
The Hon. E. Brooker.

Attorney-General—
The Hon. R. F. Fagan.

Minister for Agriculture—
The Hon. J. L. Madden.

Minister for Lands and Works and Minister for Mines—
The Hon. E. E. Reece.

Chief Secretary and Minister for Health—
The Hon. A. J. White.

Honorary Ministers—
The Hon. R. L. Worsley, M.L.C.
(Minister for Forests).

The Hon. E. R. A. Howroyd.
(Minister controlling the Tourist and Immigration Department)

The Hon. C. B. Aylett
(Minister for Housing).

4. **The Course of Legislation.**—The actual legislation by the Commonwealth Parliament up to the end of 1946 is indicated in alphabetical order in Vol. XLIV. "The Acts of the Parliament of the Commonwealth of Australia passed during the year 1946, in the Third Session of the Seventeenth Parliament of the Commonwealth, and portion of the First Session of the Eighteenth Parliament of the Commonwealth, with Tables and Index." A "Chronological Table of Acts passed from 1901 to 1946, showing how they are affected by subsequent legislation or lapse of time" is also given, and, further, "A Table of Commonwealth Legislation passed from 1901 to 1946 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information. In issues of the Official Year Book prior to No. 23, an analytic table was included showing the nature of Commonwealth legislation in force at the end of the latest year available. A classification of legislation, according to its relation to the several provisions of the Constitution, up to the end of the year 1928 will be found in No. 22, pp. 76–84.

§ 4. Commonwealth Government Departments.

The following paragraphs list the Commonwealth Government Departments as at 31st March, 1947, and show details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department.

1. **The Prime Minister's Department.**—(i) *Matters dealt with.* Administrative arrangements; archives, provisional arrangements for; Art Advisory Board; Cabinet Secretariat; Channel of communication for all Departments with the Governor-General, State, British and Dominion Governments (excepting by cablegram); Commonwealth Literary Fund; Federal Executive Council; Government hospitality; High Commissioner's Office, London; Historic Memorials; Premiers' Conferences; Preparation and publication of—*Commonwealth of Australia Gazette, Federal Guide*; Royal Commissions; State and ceremonial functions.

(ii) *Acts administered.* Committee of Public Accounts; Commonwealth Grants Commission; Commonwealth Public Service; Commonwealth Public Works Committee; Commonwealth Salaries; Defence (Transitional Provisions) insofar as it relates to the following Regulation:—National Security (Supplementary) Regulation 120; High Commissioner; Migrant Settlement Agreement; Ministers of State; Officers' Rights Declaration; Parliamentary Allowances; Parliamentary Salaries Adjustment; Royal Commissions; Science and Industry Endowment; Science and Industry Research; Special Annuity.

2. **The Department of the Treasury.**—(i) *Matters dealt with.* Appropriation and Supply; Banking; Board of Business Administration—including Inspection Staff; Capital Issues; Census and Statistics; Commonwealth Advertising—Control; Commonwealth Stores Supply and Tender Board; Currency, Coinage and Legal Tender; Employees' Compensation; Enemy Property; Financial Assistance to States; Financial aspects of Social Services, Health, Housing, Education and Reconstruction matters; Financial Review and Co-ordination of Pay, Works, Services, Supplies and other proposals of Service Departments; Foreign Exchange; Government Printing; Insurance Deposits; Interest rates; Investigations—actuarial; Investigation of proposals relating to Prices Stabilization, Transport, Communications, Government Subsidies and Financial assistance to Primary and Secondary Industries; Land Sales—Control; Life Insurance; Loan

Council and all Loan matters ; Pensions and Retiring Allowances under the Constitution ; Public Debt and National Debt Sinking Fund ; Public Accounts ; Public Finance including relationship to Employment and National Income ; Soldier Land Settlement Finance ; Superannuation ; Taxation, other than duties of Customs and of Excise ; War Damage Insurance ; War Gratuity—Administration.

(ii) *Acts administered.* Appropriation ; Appropriation (Unemployment Relief) ; Audit ; Banking ; Berry Fruit Growers Relief ; Census and Statistics ; Coinage ; Commonwealth Bank ; Commonwealth Debt Conversion ; Commonwealth Employees' Compensation ; Commonwealth Employees' Furlough ; Commonwealth Inscribed Stock ; Constitution Alteration (State Debts) ; Debt Conversion Agreement ; Defence (Transitional Provisions) 1946, Section 12 and insofar as it relates to the following National Security Regulations :—Board of Business Administration, Capital Issues, Economic Organization except Part V., Enemy Property, Guarantee and War Damage to Property ; Economic Research ; Entertainment Tax Assessment ; Entertainment Tax ; Estate Duty ; Estate Duty Assessment ; Financial Agreement ; Financial Agreements (Commonwealth liability) ; Financial Agreement Validation Act ; Financial Emergency 1931–1938 (except Parts VI., VII., VIII.) ; Financial Relief 1932–1938 (except Parts VI. and VII.) ; Financial Relief 1933 (except Part VII.) ; Financial Relief 1934–1938 (except Parts VI. and VII.) ; Financial Relief 1936–1938 (except Parts V. and VI.) ; Flour Tax ; Flour Tax (Imports and Exports) ; Flour Tax (Stocks) ; Flour Tax (Wheat Industry Assistance) Assessment ; Funding Arrangements ; Gift Duty ; Gift Duty Assessment ; Gold Mining Encouragement ; Gold Tax ; Gold Tax Collection ; Immigration Loan ; Income Tax ; Income Tax Assessment ; Income Tax Collection ; Income Tax (War-time Arrangements) ; Insurance ; Land Tax ; Land Tax Assessment ; Life Insurance ; Loan Appropriation (Unemployment Relief) ; Loan (Drought Relief) ; Loan Fund Expenditure ; Loan (Housing) ; Loan (Unemployment Relief Works) ; Loans Redemption and Conversion ; Loans Securities ; Marine Insurance ; National Debt Sinking Fund ; National Welfare Fund ; Naval Loan Repeal ; Pay-roll Tax ; Pay-roll Tax Assessment ; Sales Tax ; Sales Tax Assessment ; Sales Tax (Exemptions and Classifications) ; Sales Tax Procedure ; Silver Agreement ; Social Services Contribution ; Social Services Assessment ; Soldier Settlement Loans (Financial Agreement) ; States Grants ; States Grants (Drought Relief) ; States Grants (Drought Relief) ; States Grants (Fertilizer) ; States Grants (Local Public Works) ; States Grants (Tax Reimbursement) ; States Grants (Unemployment Relief) ; States Grants (Youth Employment) ; Statistical Bureau (Tasmania) ; Superannuation ; Supply ; Surplus Revenue ; Tasmania Grant (Flour Tax) ; Tasmania Sinking Fund Agreement ; Tasmania Loan Redemption ; Taxation of Loans ; Transferred Officers' Pensions ; Trans-Pacific Flight Appropriation ; Treasury Bills ; Treaties of Peace (Austria and Bulgaria) ; Treaty of Peace (Germany) ; Treaty of Peace (Hungary) ; War Gratuity ; War Precautions Act Repeal ; War Tax ; War-time (Company) Tax ; War-time (Company) Tax Assessment ; War-time Profits Tax ; War-time Profits Tax Assessment ; Wheat Tax ; Wool Tax ; Wool Tax Assessment ; Wool (Contributory Charge) ; Wool (Contributory Charge) Assessment ; Wool Industry Fund.

3. **The Attorney-General's Department.**—(i) *Matters dealt with.* Administration of law and justice in and registration for the Australian Capital Territory ; Arbitration and conciliation in relation to industrial disputes ; Arbitration in relation to employment in the Commonwealth Public Service ; Bankruptcy and Insolvency ; Bills of Exchange and Promissory Notes ; Copyright ; Crown Law Officers ; Designs ; Divorce and Matrimonial Causes ; Foreign Corporations ; Investigations in respect of offences against Commonwealth law ; Judiciary and Courts ; Legal aid to members of the Forces and their dependants ; Litigation in which the Commonwealth is a party and prosecution of offences against Commonwealth laws ; Marriage ; Parliamentary drafting and legal drafting including Bills, Regulations under Commonwealth Acts, Ordinances, Proclamations, Orders and Agreements) ; Patents ; Peace Officers ; Police (Australian Capital Territory) ; Recognition throughout the Commonwealth and its Territories of the laws, records and judicial proceedings of the States and the Territories ; Reporting of proceedings of Commonwealth tribunals ; Commonwealth Investigation Service ; Service and execution

throughout the Commonwealth and its Territories of the Process and Judgments of the States and the Territories; Trade Marks; Trading and Financial Corporations formed within the limits of the Commonwealth.

(ii) *Acts administered.* Acts Interpretation; Amendments Incorporation; Arbitration (Public Service); Bankruptcy; Bills of Exchange; Black Marketing; Boy Scouts Association; Commonwealth Conciliation and Arbitration; Copyright; Crimes; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations and Orders—Regulations—Claims against the Commonwealth in relation to Visiting Forces, Evidence, General—Regulations 25, 26, 69A, 73, 84, 87, 88, and 91, Industrial Property, Supplementary—Regulations 1, 3, 4, 16, 52, 62, 80, 91, 94, 100, 116, 133, War Deaths and War Service Moratorium: Orders—Orders under Regulation 61 of the National Security (Supplementary) Regulations; Designs; Evidence; Extradition; High Court Procedure; Judiciary; Judiciary (Diplomatic Representation); Jury Exemption; Legal Proceedings Control; Parliamentary Papers; Patents; Patents, Trade Marks, Designs and Copyright (War Powers); Peace Officers; Re-establishment and Employment 1945 (Parts II., Division 2, IX. and X.); Rules Publication; Seat of Government Supreme Court; Service and Execution of Process; Solicitor-General; State and Territorial Laws and Records Recognition; Statute Law Revision; Statutory Declarations; Trade Marks; War Precautions Act Repeal 1920–1934 insofar as it relates to paragraph (*e*) of section 22.

4. **The Department of External Affairs.**—(i) *Matters dealt with.* Antarctica—Australian-New Zealand Agreement: Implementation through Australian-New Zealand Affairs Secretariat; Australian Legations and other permanent missions abroad, with the exception of the Australian High Commissioner in London; British Commonwealth Representatives in Australia, with the exception of the High Commissioner for the United Kingdom; Channel of communication—(i) for all matters between other Departments and diplomatic missions in Australia; (ii) for all matters between other Departments and Australian Legations and other missions abroad except the Australian High Commissioner in London; Communication with United Kingdom diplomatic missions and consulates; Consuls and consular matters; Custody of property in Australia of enemy powers; Diplomatic and official visas; Diplomatic and consular missions in Australia; Foreign affairs and relations with foreign Governments; Inter-Imperial and Dominion political relations; International Conferences; International Organizations (including the United Nations Relief and Rehabilitation Administration, United Nations War Crimes Commission, Far-Eastern Commission, Allied Council for Japan, and Inter-Allied Reparations Agency); International questions affecting policy in respect of mandates, and trusteeship, nationality, status of aliens, immigration and emigration and economic relations; International Red Cross Delegate in Australia; Prisoners of War and Internees in Australia—Policy; Protection of Australian nationals and interests abroad, including claims against enemy and ex-enemy countries; Territorial waters; Treaties and International Agreements; United Nations Organization, its organs and its specialized agencies (including the Atomic Energy Commission, Food and Agricultural Organization, Education, Scientific and Cultural Organization, World Health Organization, International Civil Aviation Organization, and International Labour Office, and the International Court of Justice).

(ii) *Acts administered.* Australian Antarctic Territory Acceptance; Defence (Transitional Provisions) 1946 insofar as it relates to National Security (Supplementary) Regulation 139.

5. **Department of Defence.**—(i) *Matters dealt with.* Defence Policy; Higher Defence Organization; Matters on policy or principle and important questions having a Joint Service or Inter-departmental defence aspect.

(ii) *Acts administered.* Defence (except in relation to the organization and control of the Naval, Military or Air Forces); Defence (Transitional Provisions) 1946 insofar as it relates to the following National Security Regulations:—Women's Services, and Supplementary—Regulations 11, 33; Defence (Visiting Forces); Geneva Convention; Telegraph.

6. **The Department of the Navy.**—(i) *Matters dealt with.* Naval Defence.

(ii) *Acts administered.* Control of Naval Waters; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations:—General—Regulations 31A, 37, insofar as they relate to the Naval Forces, Naval Charter Rates, Naval Forces and Supplementary—Regulations 18, 47, 63, insofar as they relate to the Naval Forces; Naval Defence; Treaties of Washington; War Precautions Act Repea 1920–1934, Section 22 (with the exceptions of paragraphs (*e*) and (*f*)) in relation to the Naval Forces.

7. **The Department of the Army.**—(i) *Matters dealt with.* Military Defence.

(ii) *Acts administered.* Australian Imperial Force Canteens Funds; Defence (in relation to the organization and control of the Military Forces); Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations:—General—Regulations 31A, 37, insofar as they relate to the Military Forces, Internment Camps, Military Forces, Prisoners of War and Supplementary—Regulations 18, 47, 63, insofar as they apply to the Military Forces; War Precautions Act Repeal 1920–1934, Section 22 (with the exception of paragraphs (*e*) and (*f*)) in relation to the Military Forces; War Service Estates.

8. **The Department of Air.**—(i) *Matters dealt with.* Air Defence.

(ii) *Acts administered.* Air Force; Defence (in relation to the organization and control of the Air Force); Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations:—General—Regulations 31A, 37, insofar as they apply to the Air Force, Supplementary—Regulations 58 and 129, and Supplementary—Regulations 18, 47, 63, insofar as they apply to the Air Force.

9. **The Department of Munitions.**—(i) *Matters dealt with.* Manufacture, acquisition, provision and supply of munitions (that is to say, armaments, aircraft, arms, ammunition, weapons, vehicles, machines, vessels or ships, including the materials necessary for the production of those things) and all matters incidental thereto, involving—operation and management of factories, workshops and undertakings concerned in the production of munitions, acquisition by the Commonwealth and the establishment of factories and workshops for the purpose of producing munitions, securing of supplies of materials, plant, tools and equipment for that purpose, employment and training of technicians, workmen and others for that purpose, and arrangements and all action necessary to secure the supply, manufacture, processing and delivery of munitions; Building of merchant ships and other vessels (other than Naval vessels) and repair and maintenance of all merchant ships and the provision of dry docking and repairing facilities for merchant ships; Production in Australia of ingot aluminium; Control and limitation of profits in relation to the production of munitions by private enterprise.

(ii) *Acts administered.* Aluminium Industry; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations:—Munitions and Shipbuilding.

10. **The Department of Trade and Customs.**—(i) *Matters dealt with.* Analysis of goods; Bounties (general); By-laws (customs and excise)—administration of; Censorship of cinematograph films and literature; Contraband control in time of war; Cotton bounty; Customs administration; Customs tariffs; Dangerous drugs—control under international conventions; Detection of offences; Distillation of spirits; Disposal in some cases of remaining stocks of goods imported under Lease-Lend and Canadian Mutual Aid; Dumping and unfair competition; Economic investigation of industries; Exchange control relating to imports and exports; Excise administration; Excise tariffs; Export control—monetary and commodity; Export licensing; Export prohibitions; Films, cinematograph—censorship; Goods, procurement of; Immigration, co-operation with the Department of Immigration; Import control; Import licensing; Import prohibitions; International Convention for Aerial Navigation—provisions relating to customs matters; Investigations—trade and special; Lease-Lend transactions; Literature—censorship; Malt—Control of manufacture and distribution;

Marking and labelling of imported goods; Monopolies and combines; Newsprint—restrictions on use of; Newsprint pool; Papua and New Guinea Bounties; Preferential tariffs; Prices control; Primage duties; Prize Courts; Procurement of goods; Prosecutions for offences; Protection of primary and secondary industries; Quarantine, co-operation with the Department of Health; Rationing of goods; Registration of British ships; Requisitioned cargoes, disposal of; Secret Commissions; Shipping—treatment of merchant shipping in port in time of war; Smuggling, prevention of; Sponsorship of orders for overseas goods; Statistical classification of imports and exports , Sugar—Export Sugar Committee, Fruit Industry Sugar Concession Committee, International Sugar Agreement, Rebate on sugar contents of exported goods, Sugar industry control; Sulphur Bounty; Tariff revision; Tariff administration (Customs and Excise); Tariff Board; Tea, Coffee and Chicory control; Tractor Bounty; Trade agreements, Trade Treaties; Trade Relations—International; Trade and commerce—action in relation to restraint of; Trade descriptions (Imports); Trade statistics—Collection of statistics relating to imports and exports; Trading with the Enemy—Administration; Tyre Cord Bounty; Values—Domestic in overseas countries; Wine Export Bounty; Wire Netting Bounty.

(ii) *Acts administered.* Australian Industries Preservation; Beer Excise; Canvas and Duck Bounty; Commerce (Trade Descriptions) 1905–1933 insofar as it relates to imports; Customs; Customs Tariff; Customs Tariff (Canadian Preference); Customs Tariff (Exchange Adjustment); Customs Tariff (Industries Preservation); Customs Tariff (Newfoundland Preference); Customs Tariff (New Zealand Preference); Customs Tariff (New Zealand Preference) Agreement; Customs Tariff (Papua and New Guinea Preference); Customs Tariff (Primage Duties); Customs Tariff (Southern Rhodesian Preference); Customs Tariff Validation; Defence (Transitional Provisions) 1946—insofar as it relates to the following National Security Regulations:—Prices, Rationing, Requisitioned Cargoes, Supplementary—Regulations 14, 38, 49, Tea Control and Wine Industry; Distillation; Excise; Excise Tariff; Excise Tariff Rebate; Excise Tariff Validation; Merchant Shipping—insofar as they relate to registration of British ships; Newsprinting Paper Bounty; New Zealand Re-exports; Papua and New Guinea Bounties; Raw Cotton Bounty; Secret Commissions; Spirits; Sugar Agreement; Sulphur Bounty; Tariff Board; Tractor Bounty; Trade Agreement (Belgium); Trade Agreement (Brazil); Trade Agreement (Czechoslovakia); Trade Agreement (France); Trade Agreement (Greece); Trade Agreement (Newfoundland); Trade Agreement (South Africa); Trade Agreement (Southern Rhodesia); Trade Agreement (Switzerland); Trading with the Enemy Act; Tyre Cord Bounty; United Kingdom and Australia Trade Agreement; Wine Export Bounty; Wire Netting Bounty.

11. **The Department of Commerce and Agriculture.**—(i) *Matters dealt with.* Agricultural production; Agricultural economics; Assistance to primary producers; Australian Agricultural Council; Collection and dissemination of commercial intelligence and general information; Contact with State Departments of Agriculture regarding agricultural production; Contact with the following organizations and administration of any Commonwealth Acts under which they are established:—Australian Apple and Pear Advisory Council, Australian Apple and Pear Marketing Board, Australian Barley Board, Australian Canned Fruits Board, Australian Citrus Advisory Council, Australian Dairy Produce Board, Australian Hides and Leather Industries Board, Australian Meat Board, Australian National Publicity Association, Australian Potato Board, Australian Tobacco Board, Australian Wheat Board, Australian Wine Board, Australian Wool Board, Australian Wool Realization Commission, Commonwealth Food Control, Council for the Australian Pig Industry, Dairy Produce Control Committee, Dried Fruits Control Board, Egg Producers' Council, Federal Potato Advisory Committee, Field Peas Board, Meat Canning Committee, Meat Industry Advisory Committee, Standing Committee on Agriculture, Superphosphate Industry Committee, Wheat Industry Stabilization Board, Wheat Stabilization Advisory Committee, Eastern Trade Advisory Committee; Exhibitions (organization of trade exhibits); External Trade—Overseas trade promotion; Fisheries—Administration of Commonwealth policy and co-ordination of State activities and control of fishing in extra-territorial waters; General trade inquiries; Investigation

of overseas trade matters ; Inspection and/or grading of dairy produce, meat, fruit (fresh, dried and canned), jams, honey, vegetables, &c., exported from the Commonwealth ; Investigation of marketing, economic and other problems of farming industries ; Marketing investigations abroad ; Rural credits ; Rural man-power ; Tourist publicity abroad ; Trade agreements—Administration of export aspects, collaboration with other Departments in negotiations ; Trade Commissioner Service ; Trade publicity and advertising in Australia, the United Kingdom and elsewhere ; Trade Surveys for specific commodities.

(ii) *Acts administered.* Advances to Settlers ; Apple and Pear Export Charges ; Apple and Pear Organization ; Apple and Pear Publicity and Research ; Berry Fruitgrowers Relief ; Canned Fruits Export Charges ; Canned Fruits Export Control ; Citrus Fruits Bounty ; Commerce (Trade Descriptions) 1905–1933, insofar as it relates to exports ; Dairy Produce Export Charges ; Dairy Produce Export Control ; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations and Order :—Regulations—Agricultural Aids, Agricultural Production, Apple and Pear Acquisition, Australian Barley Board, Australian Tobacco Leaf, Beef Shortage, Dairy Produce Acquisition, Egg Industry, Food Control, Hide and Leather Industries, Potatoes, Rabbit Skins, Staff of War-time Authorities, Superphosphate Industry, Wheat Acquisition, Wheat Industry Stabilization and Supplementary—Regulation No. 57 : Order—Agricultural Machinery—Order No. 1 ; Dried Fruits Export Charges ; Dried Fruits Export Control ; Export Guarantee ; Financial Relief 1932–1938 (Parts VI. and VII.) ; Financial Relief 1934–1936 (Parts VI. and VII.) ; Financial Relief 1936–1938 (Part VI.) ; Fruit Growers Relief ; Loan (Drought Relief) ; Loan (Farmers Debt Adjustment) ; Meat Export Charges ; Meat Export Control ; Meat Industry Control ; Primary Produce Export Charges ; Primary Produce Export Organization ; Primary Producers Relief ; Queensland Meat Inspection Agreement ; Rabbit Skins Export Charges ; Rabbit Skins Export Charges Appropriation ; States Grants (Drought Relief) ; States Grants (Fertilizer) ; Trade Commissioners ; Wheat Export Charges ; Wheat Industry Assistance ; Wheat Industry Stabilization ; Wheat Industry (War-time Control) ; Wine Grapes Charges ; Wine Overseas Marketing ; Wire and Wire Netting ; Wool Industry Fund ; Wool (Contributory Charges) ; Wool (Contributory Charges) Assessment ; Wool Realization ; Wool Use Promotion.

12. **The Postmaster-General's Department.**—(i) *Matters dealt with.* Broadcasting ; Postal and Telecommunication Services.

(ii) *Acts administered.* Australian Broadcasting ; Commercial Broadcasting Stations Licence Fees ; Defence (Transitional Provisions) 1946, insofar as it relates to National Security (General) Regulation 11 ; Overseas Telecommunications ; Parliamentary Proceedings Broadcasting ; Post and Telegraph ; Post and Telegraph Rates ; Post and Telegraph Rates (Defence Forces) ; Purchase Telephone Lines Acquisition ; Telegraph ; Wireless Telegraphy

13. **The Department of the Interior.**—(i) *Matters dealt with.* Accommodation for Commonwealth Departments ; Ashmore and Cartier Islands ; Astronomy ; Australian Capital Territory, developmental planning and administration of, with the exception of Health, Justice and Police ; Australian Commonwealth Shipping Board ; *Australian Official War History* 1939–1945 ; Australian War Memorial ; Civil Defence ; Commonwealth Observatory ; Conveyance of Members of Parliament and others ; Elections and Franchise ; Forestry and Timber ; Geodesy ; Land for Commonwealth purposes, acquisition and leasing of ; Mapping, Topographical and Geographical, including International and Aeronautical Maps ; Meteorology ; National Mapping Council ; Northern Territory ; Property, Commonwealth, management of ; Railways, Commonwealth ; Soil Conservation ; Surveys, Land, Engineering, Topographical and Geodetic ; War Graves.

(ii) *Acts administered.* Ashmore and Cartier Islands Acceptance ; Australian War Memorial ; Cockatoo Island Dockyard Agreement ; Commonwealth Electoral ; Commonwealth Electoral (War-time) Repeal ; Commonwealth Observatory Fund ; Commonwealth Railways ; Commonwealth Shipping ; Constitution Alteration (Senate Elections) ;

Defence (Transitional Provisions) 1946, insofar as it relates to the following Regulations :— National Security (General) Regulations 54, 55AA, 55A, 57, 60B–G, 60J–M ; Darwin Lands Acquisition ; Forestry and Timber Bureau ; Grafton to South Brisbane Railway ; Jervis Bay Territory Acceptance ; Kalgoorlie to Port Augusta Railway ; Kalgoorlie to Port Augusta Railway Lands ; Lands Acquisition ; Meteorology ; Northern Territory Acceptance ; Northern Territory (Administration) ; Northern Territory Railway Extension ; Northern Territory Representation ; Oodnadatta to Alice Springs Railway ; Pine Creek to Katherine River Railway ; Port Augusta to Port Pirie Railway ; Referendum (Constitution Alteration) ; Representation ; Seat of Government Acceptance ; Seat of Government ; Seat of Government (Administration) ; Seat of Government Railway ; Senate Elections.

14. **The Department of Labour and National Service.**—(i) *Matters dealt with.* Investigations and research into problems affecting employer-employee relationships ; Matters arising from Australia's membership of the International Labour Office ; Supervision and regulation of industrial relations ; Channel of communication between the Government and industrial organizations and industrial workers ; Administration of the wage-pegging regulations ; Central and Local Coal Reference Boards ; Employment of women in industry, with particular reference to minimum rates ; Provision of a reference authority for production Departments and industry in general on good personnel practice ; Advice to employers on methods of improving physical working conditions in industrial establishments ; Technical advice and assistance to factories about the setting up or operation of food services, and provision of reference authority on the operation of cafeterias in Commonwealth establishments ; Control and supervision of vocational training (other than University type) of—(*a*) discharged members of the forces, and (*b*) civilians ; Control and supervision of correspondence instruction (other than University type) of members of the Forces within the Services Education Scheme ; Control and supervision of pre-vocational and vocational training of disabled persons as defined under the Re-establishment and Employment Act 1945 ; Control and supervision of technical training of enlisted personnel for technical units of the Forces ; Commonwealth Employment Service ; Employment re-establishment of discharged service men and service women and of the disabled ; Receipt, investigation and payment of claims under the Unemployment and Sickness Benefits Act 1944 (as agent for the Department of Social Services) ; Receipt, investigation and payment of claims for re-employment allowance under Division 2 of Part VI. of the Re-establishment and Employment Act 1945 (as agent for the Repatriation Commission) ; Reinstatement in civil employment.

(ii) *Acts administered.* Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations :—Boot Trades Dilution, Coal Mining Industry Employment, Economic Organization Part V., Female Minimum Rates, Industrial Peace and Supplementary—Regulation 90 ; Re-establishment and Employment 1945 (Part II., Divisions 1, 3 and 5) ; Tradesmen's Rights Regulation ; Women's Employment.

15. **The Department of Supply and Shipping.**—(i) *Matters dealt with.* Commonwealth Oil Refineries Ltd. (Government relations with) ; Coal production and distribution ; Importation, sale and use of liquid fuels and petroleum products, promotion of production of indigenous liquid fuels, and in particular, the production of shale oil, power alcohol and benzol ; Control and maintenance of coastal lights and other aids to navigation on the ocean highways of the Australian coastline ; Control of navigation services such as seamen's compensation, prevention of obstructions on shipping routes and fishing grounds, accommodation for ships' crews, welfare of seamen, maintenance of ships' gear, examination of masters and officers, Courts of Marine Inquiry ; Shipping, including the best utilization of the Australian coastal fleet, the chartering of ships, the manning of ships ; Stevedoring labour and operations, delivery of cargo to and from ships, including wharf clearance and storage of cargo ; Stowage and movement of explosives and dangerous cargoes at Australian ports ; Importation and use of tinplate ; Importation and use of jute ; Co-ordination of supply of essential goods from Australia to the Pacific Islands,

and of supplies to U.N.R.R.A. ; Disposal of surplus Commonwealth property ; Oversight of production of strategic minerals, metals, concentrates, and of the investigation of these resources ; Production of flax ; Procurement of supplies (other than arms and ammunition, aircraft and foodstuffs for the Services) and the control of the production and distribution of supplies where their conservation is necessary ; Prospecting for precious metals—assistance for.

(ii) *Acts administered.* Beaches, Fishing Grounds and Sea Routes Protection 1932 (except Section 3) ; Coal Industry ; Coal Production (War-time) ; Colonial Light Dues Collection ; Colonial Light Dues (Rates) ; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations and Orders :—Regulations—Disposal of Commonwealth Property, General—Regulation 66, Jute Liquid Fuel, Maritime Industry, Medical Benefits for Seamen, Minerals, Shipping Co-ordination, Supplementary—Regulation 142 and Tinplate Control : Orders—Control of Tinplate, Control of Footwear (Styles and Quality), Cordage and Fibre, Jute Goods and Shirts, Collars and Pyjamas : Development and Migration ; Geophysical Survey ; Lighthouses ; National Oil Proprietary Ltd. Agreement ; Navigation : Northern Australia Survey ; Oil Agreement ; Petroleum Oil Search ; Petroleum Prospecting ; Precious Metals Prospecting ; Sea Carriage of Goods ; Seamen's Compensation ; Seamen's War Pensions and Allowances 1940–1946 (except pensions and allowances provisions administered by the Repatriation Department) ; Supply and Development 1939–1944 (except Part III.—Aircraft Assembly and except insofar as it relates to the production or supply of munitions) ; Whaling.

16. **The Department of Works and Housing.**—(i) *Matters dealt with.* Design, estimate of cost, supervision and execution of all architectural and engineering works (both capital and maintenance) for the Commonwealth Government and such other works as may be requested by a State or an authority of the Commonwealth or of a State ; Formulation of town planning proposals in areas controlled by the Commonwealth in collaboration with other responsible Departments ; Investigation, planning and development of such works of national importance as are referred to the Department by the Commonwealth Government ; Submission to the Defence Services of works proposals or works plans (other than Defence Works) for which the Commonwealth is wholly or partially responsible, and which the Department considers may have strategic significance ; Essential Materials—Control of ; Financial assistance to States for roads ; Housing—Finance ; Rent Control ; Research (Commonwealth Experimental Building Station, New South Wales) ; River Murray Commission ; Provision of homes for Australian soldiers who served during the 1914–1918 war and during any war in which His Majesty became engaged on or after 3rd September, 1939, also for the female dependants of Australian soldiers and other classes of eligible persons as defined in the War Service Homes Act 1918–1946.

(ii) *Acts administered.* Commonwealth-State Housing Agreement ; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations and Order :—Regulations—Landlord and Tenant and Salvage : Order—Control of Essential Materials : Federal Aid Roads ; Federal Aid Roads and Works ; Re-establishment and Employment 1945 (Part VIII.) ; River Murray Waters ; War Service Homes ; War Service Homes Agreement ; War Service Homes (South Australia) Agreement.

17. **The Department of Civil Aviation.**—(i) *Matters dealt with.* Civil Aviation.

(ii) *Acts administered.* Australian National Airlines ; Air Navigation ; Carriage by Air ; Defence (Transitional Provisions) 1946, insofar as it relates to National Security (Supplementary) Regulation 58 ; Empire Air Service (England to Australia).

18. **The Department of Social Services.**—(i) *Matters dealt with.* Allowances for wives and children of invalid pensioners ; Child Endowment ; Compassionate allowances to persons ineligible for Invalid, Age and Widows' Pensions and Maternity Allowances ; Compensation or pensions to, or in respect of—Ex-members of the Civil Constructional Corps, ex-civil defence workers, and civilians who suffered a war injury ;

Evacuees and ex-internees—reception and after-care of; Funeral benefits for invalid and old-age pensioners; Invalid pensions; Maternity allowances; Age pensions; Payment of—Commonwealth Literary Fund allowances, financial assistance to University students, imperial pensions (other than war pensions), judiciary pensions, Pensions and retiring allowances under Section 84 of the Commonwealth Constitution, special annuities granted by the Commonwealth and superannuation to retired Commonwealth employees; Reciprocity with New Zealand in relation to invalid and age pensions and invalid and age benefits; Rehabilitation of ex-members of the Forces not eligible for repatriation benefits; Rehabilitation of invalid pensioners; Sickness benefits; Social Service proposals and activities generally; Unemployment benefits; Vocational training of invalid pensioners and unemployment and sickness beneficiaries; Widows' pensions.

(ii) *Acts administered.* Child Endowment; Defence (Transitional) Provisions 1946 (Section 13); Invalid and Old-age Pensions; Invalid and Old-age Pensions (Reciprocity with New Zealand); Maternity Allowance; Re-establishment and Employment (Part IV.); Unemployment and Sickness Benefits; Widows' Pensions.

19. **The Department of Repatriation.**—(i) *Matters dealt with.* (*a*) *Functions for Members of Forces.* Determination of applications for the acceptance of disabilities as war-caused; Provision of in-patient and out-patient treatment in general hospitals, special institutions, sanatoria and hostels; War pensions and living allowances (including acting as agent for British and Dominion pensions authorities); Artificial replacements and surgical aids for members whose accepted incapacities necessitate the use of such aids; Administration of members' trust funds (pensions and war gratuities); Service pensions; Funeral benefits in certain circumstances; Placement in employment of problem cases; Supplementation of apprenticeship wages; Repatriation Vocational Training Scheme—special training of problem cases which cannot be trained by normal methods; Issue of books, requisites, equipment to trainees under the Commonwealth Reconstruction Training Scheme by arrangement with Universities Commission; Provision of grants by way of gift and under hire-purchase agreements for tools of trade to members and widows to enable them to engage in their calling or in a remunerative occupation; Provision of grants to provide immediate relief for members in necessitious circumstances; Provision of free passages to Australia for the wives, widows and children of members of the Forces still on active service or who have been discharged who married during the period of their active service outside Australia; Provision of grants by way of loan for small businesses and prescribed occupations; Provision of gifts for the purchase in certain cases of furniture for totally and permanently incapacitated or blinded members; Provision of free passages from the Commonwealth for incapacitated members and their wives and children, and for the widows and children of deceased members who desire to return to relatives or friends living outside the Commonwealth; Payment of fares in certain cases of a member and his family; Sustenance allowances; Administration of National Security (Patriotic Funds); Payment of seamen's war pensions and allowances.

(*b*) *Functions for Dependants.* War and service pensions, medical benefits and living allowances; Provision of grants by way of business loans under certain conditions; Gifts for the purchase in certain cases of furniture for widows with children whose husbands' deaths were due to war service; Provision of funeral benefits in certain cases; Administration of soldiers' children education scheme; Administration of soldiers' trust funds (pensions and gratuities); Payment of seamen's war pensions and allowances.

(*c*) *Other.* War Pensions Entitlement Appeal Tribunals; War Pensions Assessment Appeal Tribunals.

(ii) *Acts administered.* Australian Soldiers' Repatriation; Defence (Transitional Provisions) 1946, Section 11, and insofar as it relates to the National Security (Patriotic Funds) Regulations; Financial Emergency 1931–1938 (Part VI.); Re-establishment and

Employment 1945 (Section 43, Part VI., Division 2, and insofar as it relates to occupations, businesses or practices, other than agricultural occupations); Repatriation Fund (Baillieu Gift); Seamen's War Pensions and Allowances.

20. **The Department of Immigration.**—(i) *Matters dealt with.* Admission of Contract Immigrants; Aliens—Deportation of, Registration of; Emigration of Children and Aboriginals; Encouraged Migration; Immigration; Indentured Coloured Labour; Nationality and Naturalization; Passports; Publication of newspapers in foreign languages; Repatriation of destitute Australians.

(ii) *Acts administered.* Aliens Deportation; Aliens Registration; Contract Immigrants; Defence (Transitional Provisions) 1946, insofar as it relates to the following National Security Regulations:—Aliens Control and Change of Name; Emigration; Immigration; Immigration (Guardianship of Children); Nationality; Passports.

21. **The Department of Health.**—(i) *Matters dealt with.* Administration of any subsidies by the Commonwealth for the assistance of efforts by State Governments or public authorities for the eradication, prevention or control of disease in man and animals; Administration of the Nuffield Trust for Crippled Children; Administration of pharmaceutical benefits; Hospital benefits; Therapeutic substances; Assistance to the States in relation to tuberculosis; Australian Institute of Anatomy, Canberra; Collection of sanitary data and the investigation of all factors affecting health in industries; Commonwealth Serum Laboratories and the commercial distribution of the products manufactured in those laboratories; Commonwealth X-ray and Radium Laboratory, Melbourne; Conducting of campaigns of prevention of disease in which more than one State is interested; Discharge of refuse into the sea; Education of the public in matters of health; International hygiene matters affecting the Commonwealth; Investigation of causes of disease and death, and the establishment and control of laboratories for this purpose; Medical examinations of seamen and inspection of vessels under the Navigation Act and Seamen's Compensation Act; Medical examinations under the Invalid and Old-age Pensions Act, Commonwealth Public Service Act, Commonwealth Employees Compensation Act and other relevant Acts; Medical Research and National Health and Medical Research Council; Methods of prevention of disease; Munitions Medical Service; National Fitness and Commonwealth Council for National Fitness; National Health Campaign and the Lady Gowrie Child Centres for pre-school children; Public Health and Medical Services in the Northern Territory; Public Health and Animal Health Administration in the Australian Capital Territory; Quarantine, including quarantine of animals and plants; School of Public Health and Tropical Medicine, Sydney; Supervision of broadcast advertising of patent medicines and talks on medical matters.

(ii) *Acts administered.* Australian Institute of Anatomy Agreement; Beaches, Fishing Grounds and Sea Routes Protection 1932 (Section 3); Defence (Transitional Provisions) 1946, insofar as it relates to National Security (Control of Animal Diseases) Regulations; Hospital Benefits; Medical Research Endowment; National Fitness; Pharmaceutical Benefits; Quarantine; Therapeutic Substances; Tuberculosis.

22. **The Department of Post-war Reconstruction.**—(i) *Matters dealt with.* Formulation of plans for the transition from a war to a peace economy and for long-term full employment and economic stability; Co-ordination of Services demobilization; general administration of the Commonwealth Reconstruction Training Scheme, the War Service Land Settlement and Rural Loans Schemes and other aspects of ex-service re-establishment; Provision of technical and other assistance to existing and new industries; provision of the secretariat and executive machinery for the Cabinet Standing Sub-Committee on Secondary Industries and the Secondary Industries Commission; Administration through the Commonwealth Office of Education of financial assistance to ex-service and civilian University students, of Commonwealth grants for social science research, and, in general, responsibility for advising on Commonwealth interests in education, responsibility for the Commonwealth's interests in regional

planning and development—provision of secretarial and investigational assistance in respect of large regional projects and of the work of the North Australia Development Committee.

(ii) *Acts administered.* Commonwealth Education; Defence (Transitional Provisions) 1946 (except Sections 11, 12 and 13 and except where the administration of particular provisions is otherwise expressly provided for); National University; Re-establishment and Employment 1945 (Parts I., II., Division 4; III.; V.; VI., Divisions 1, 3 and 4, VII.; XI.); War Service Land Settlement Agreements.

23. **The Department of Information.**—*Matters dealt with.* (*a*) *National Publicity.* Through an editorial and pictorial production organization in Australia, servicing overseas publicity officers, through the publication of essential facts and figures relating to the Australian economy and administration, and through the organization of Australian exhibitions for use abroad (in association with Department of Commerce and Agriculture in the case of trade exhibits).

(*b*) *Conduct and administration of shortwave broadcasting.* Transmitting national publicity to overseas countries, and foreign policy broadcasts to allied and former enemy countries in association with the Department of External Affairs.

(*c*) *Other.* Administration of the National Film Board; Immigration publicity in association with the Department of Immigration; Establishment and servicing of Australian News and Information Bureaux abroad; Appointment and servicing of Press Attachés to Australian Diplomatic Missions, and of Information Officers attached to Australian Trade Commissioners.

24. **The Department of External Territories.**—(i) *Matters dealt with.* Administration of the Territories of—Nauru, New Guinea, Norfolk Island, Papua; Australian-New Guinea Production Control Board; Australian School of Pacific Administration; British Phosphate Commissioners; Expropriated Properties (New Guinea); Shipping services to certain Pacific Islands; Shipping services within the Territories of Papua and New Guinea; Transfer of prisoners from Territories outside the Commonwealth.

(ii) *Acts administered.* Defence (Transitional Provisions) 1946, insofar as it relates to the following Regulations:—National Security (External Territories) Regulations; Nauru Island Agreement; New Guinea; Norfolk Island; Papua; Papua-New Guinea Provisional Administration; Removal of Prisoners (Territories); Treaty of Peace (Germany) 1919–1920 (Section 2, and Part II., Treaty of Peace Regulations).

25. **The Department of Transport.**—(i) *Matters dealt with.* Administration of Standardization of Railways Agreement; Federal Aid Roads; Australian Transport Advisory Council; Control of the distribution of motor cars and utilities.

(ii) *Acts administered.* Standardization of Railways Agreement; Defence (Transitional Provisions) Act, insofar as it relates to the following Orders:—Control of New Commercial Motor Vehicles, and Control of New Motor Cars.

§ 5. Cost of Parliamentary Government.

The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended 30th June, 1946. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1945–46.

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. *Governor-General or Governor*—	£	£	£	£	£	£	£	£
Governor's salary	10,000	2,500	5,000	2,925	5,000	(*a*)2,000	2,007	29,432
Other salaries	1,437	4,875	957	1,875	804	623	1,904	12,475
Other expenses, including maintenance of house and grounds	*b*25,810	9,302	8,897	(*b*)3,446	2,319	3,470	9,449	62,693
Total	37,247	16,677	14,854	8,246	8,123	6,093	13,360	104,600
2. *Executive Council*—								
Salaries of Officers ..	(*c*)	..	684	30	(*d*)	60	(*d*)	774
Other expenses	(*c*)	66	98	36	(*d*)	..	(*d*)	200
Total	(*c*)	66	782	66	(*d*)	60	(*d*)	974
3. *Ministry*—								
Salaries of Ministers ..	22,160	21,629	11,234	15,595	7,750	8,604	6,795	93,767
Travelling expenses ..	6,275	(*e*)	(*e*)	..	(*e*)	2,589	2,991	11,855
Other	594	2,878	(*e*)	..	(*e*)	23	3,201	6,696
Total	29,029	24,507	11,234	15,595	7,750	11,216	12,987	112,318
4. *Parliament*—								
A. *Upper House*:								
President and Chairman of Committees	2,000	1,863	1,595	..	1,000	1,832	258	8,548
Allowance to members ..	36,154	(*f*) 150	10,465	..	10,400	19,897	7,082	84,148
Railway passes	5,760	11,730	(*g*)9,000	..	1,387	4,068	1,100	33,045
Postage for members ..	2,906	(*h*)	484	..	83	383	..	3,856
B. *Lower House*:								
Speaker and Chairman of Committees	2,000	2,790	(*i*) 2,421	2,600	1,600	1,932	350	13,693
Allowance to members ..	75,049	69,050	35,959	44,925	19,642	31,750	11,980	288,355
Railway passes	12,000	18,660	(*j*)	11,731	2,705	6,994	1,650	53,740
Postage for members ..	5,831	(*g*)3,374	1,720	2,531	486	613	(*e*)	14,555
C. *Both Houses*:								
Standing Committee on Public Works—								
Expenses of members ..	..	..	(*k*)	..	1,900	..	261	2,161
Salaries of staff and contingencies ..	..	626	(*k*)	..	1,321	..	75	2,022
Printing—								
Hansard	15,198	5,892	3,642	5,277	3,227	3,627	..	36,863
Other..	10,427	8,394	4,518	1,219	6,623	970	3,107	35,258
Reporting staff—								
Salaries	11,970	9,207	8,199	3,526	6,590	6,331	..	45,823
Contingencies	158	160	651	..	618	140	..	1,727
Library—								
Salaries	8,955	3,754	2,554	1,425	1,553	88	..	18,329
Contingencies	3,785	1,776	772	879	687	240	198	8,337
Salaries of other officers ..	61,173	33,618	13,543	10,254	9,083	9,238	4,670	141,579
Other	50,601	1,460	..	..	(*l*) 4,475	1,897	..	58,433
D. *Miscellaneous*:								
Fuel, light, heat, power, and water	1,290	1,308	1,810	965	3,421	128	779	31,148
Posts, telegraphs, telephones	5,470	4,059	1,118	1,356	1,147	331		
Furniture, stores, and stationery	2,976	2,030		608	2,170	182		
Other	*m*85,234	2,773	102	4,339	1,060	928	1,251	95,687
Total	398,937	182,674	98,553	91,635	81,178	91,569	32,761	977,307

(*a*) Salary of Lieutenant-Governor. (*b*) Commonwealth, includes interest and sinking funds on loans, £4,667, and new works, buildings, etc., £2,710; Queensland, includes £177 allowance to Lieutenant-Governor. (*c*) Included under Governor-General. (*d*) Duties performed by Chief Secretary's Department. (*e*) Not available separately (*f*) Allowance to representative of Government, Legislative Council. (*g*) Both Houses. (*h*) Included with Lower House. (*i*) Includes Leader of the Opposition and Leader of the United Country Party. (*j*) Included with Upper House. (*k*) There is no Standing Committee, but a Public Works Committee—Members, £902; Staff, £958. (*l*) Includes Parliamentary Committee on Land Settlement, £3,668, and Joint Committee on Subordinate Legislation, £350. (*m*) Includes interest and sinking fund, Parliament House, Canberra, £37,975, and maintenance of members' rooms in capital cities, £18,029.

COST OF PARLIAMENTARY GOVERNMENT, 1945–46—*continued.*

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
5. *Electoral—*								
Salaries	96,117	2,306	1,044	4,415	3,798	5,560	(*d*)	113,240
Cost of elections, contingencies, etc.	44,814	9,493	52,854	8,938	1,413	3,220	2,029	122,761
Total	140,931	11,799	53,898	13,353	5,211	8,780	2,029	236,001
6. *Royal Commissions, Select Committees, etc.*	1,839	4,669	412	2,554	678	2,678	7,526	20,356
Total	1,839	4,669	412	2,554	678	2,678	7,526	20,356
GRAND TOTAL ..	607,983	240,392	179,733	131,449	102,940	120,396	68,663	1,451,556
Cost per head of population ..	1s. 8d.	1s. 8d.	1s. 9d.	2s. 5d.	3s. 3d.	4s. 11d.	5s. 6d.	3s. 11d.

(*d*) Duties performed by Chief Secretary's Department.

Figures showing total cost and cost per head during each of the years 1942–43 to 1945–46 in comparison with 1938–39 are given in the next table.

COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
				TOTAL.				
	£	£	£	£	£	£	£	£
1938–39 ..	516,455	232,709	114,497	106,942	97,383	113.793	49,270	1,231,049
1942–43 ..	539,475	220,958	139.224	103,204	81,867	102,146	49,609	1,236,483
1943–44 ..	664,042	252 589	140,079	131,443	90,943	117,767	52,090	1,448,953
1944–45 ..	678,542	225,392	125,374	114,923	98,420	112,707	52,150	1,407,508
1945–46 ..	607,983	240,392	179,733	131,449	102,940	120,396	68,663	1,451,556
				PER HEAD OF POPULATION.				
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1938–39 ..	1 6	1 8	1 3	2 1	3 3	4 10	4 2	3 7
1942–43 ..	1 6	1 7	1 5	2 0	2 8	4 3	4 1	3 5
1943–44 ..	1 10	1 9	1 5	2 6	2 11	4 11	4 3	4 0
1944–45 ..	1 10	1 7	1 3	2 2	3 2	4 8	4 3	3 10
1945–46 ..	1 8	1 8	1 9	2 5	3 3	4 11	5 6	3 11

§ 6. Government Employees.

1. **Australia, 1939 to 1947.**—The following table shows at June in each of the years 1941 to 1947, in comparison with 1939, the number of employees of Commonwealth and Allied Governments, State Government and Semi-Government bodies, and Local Government authorities. These include not only administrative employees but also employees engaged in all other Government activities, e.g., business undertakings, public utilities, construction of public works, munitions manufacture and in factories connected with Government undertakings and utilities. Personnel serving in the Defence Forces are excluded.

GOVERNMENT EMPLOYEES : AUSTRALIA.

June—	Commonwealth and Allied Governments.(*a*)			State Govt. and Semi-Government Bodies.			Local Government Authorities.(*b*)			Total.		
	M.	F.	Persons.	M.	F.	Persons.	M.	F.	Persons.	M.	F.	Persons.
1939(*c*) ..	56,099	11,764	67,863	235,066	40,586	275,652	58,637	2,887	61,524	349,802	55,237	405,039
1941(*c*) ..	86,416	24,811	111,227	242,601	43,214	285,815	46,236	2,787	49,023	375,253	70,812	446,065
1942 ..	139,001	49,196	188,197	240,010	47,740	287,750	41,860	3,865	45,725	420,871	100,801	521,672
1943 ..	148,941	78,126	227,067	227,682	53,441	281,123	36,690	4,305	40,995	413,313	135,872	549,185
1944 ..	137,446	74,226	211,672	229,870	55,491	285,361	37,203	4,219	41,422	404,519	133,936	538,455
1945 ..	126,212	65,803	192,015	234,859	54,812	289,671	39,106	4,231	43,337	400,177	124,846	525,023
1946 ..	108,756	40,967	149,723	276,909	49,396	326,305	49,381	3,606	52,987	435,046	93,969	529,015
1947 ..	120,287	38,187	158,474	296,982	50,121	347,103	54,783	3,778	58,561	472,052	92,086	564,138

(*a*) Includes British and United States of America authorities' civilian employees in Australia. (*b*) Partly estimated. (*c*) July.

The increase in number of employees of the Commonwealth and Allied Governments in 1941–42 and 1942–43 was due mainly to expansion of Government munition factories, Allied Works projects and administrative organizations of Allied Governments and war-time departmental controls. In 1943–44 and 1944–45 there was a decrease in Commonwealth Government employment following completion of certain munitions and defence works programmes, and a sharp decline occurred following the cessation of hostilities. Since then there has been an increase in employment because of the expansion of peace-time activities. The diminution in the number of employees of State, semi-Government and local authorities between June, 1942 and June, 1943, was due to a curtailment of peace-time work. Between June, 1945 and June, 1947, there was an increase in State and semi-Government authorities of more than 57,000, of which the major proportion was distributed between railways, works, education and administrative departments. Local government employment increased by more than 15,000 in the same period.

2. **Commonwealth and States, etc., June, 1946 and 1947.**—The number of employees of the Commonwealth and Allied Governments and of the State Governments, semi-Government and Local Government authorities in each State as at June, 1946, and 1947, are shown in the following table :—

GOVERNMENT EMPLOYEES, JUNE, 1946 AND 1947.

Employed by—	1946.			1947.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Commonwealth and Allied Governments(*a*)	108,756	40,967	149,723	120,287	38,187	158,474
New South Wales ..	131,344	19,015	150,359	137,820	19,382	157,202
Victoria	80,488	16,159	96,647	86,271	16,541	102,812
Queensland	51,744	6,118	57,862	58,185	6,014	64,199
South Australia ..	28,411	5,509	33,920	30,400	5,689	36,089
Western Australia ..	24,224	3,853	28,077	27,622	4,057	31,679
Tasmania	10,079	2,348	12,427	11,467	2,216	13,683
Total ..	435,046	93,969	529,015	472,052	92,086	564,138

(*a*) Includes British and United States of America authorities' civilian employees in Australia.

§ 7. Diplomatic and other Representatives Overseas and in Australia.

Australia has diplomatic and other representatives in the United Kingdom, Canada, New Zealand, South Africa, Eire, India, Egypt, the United States of America, Brazil, Chile, China, France, the Netherlands, the Union of Soviet Socialist Republics and other countries, in all about twenty. In addition, there are the Australian delegates to the United Nations at New York and Australian liaison officers or representatives in Malaya, with the Supreme Commander for the Allied Powers, Tokyo, and with the Allied Control Council, Berlin.

Countries represented in Australia by diplomatic and other representatives include the following :—the United Kingdom, Canada, New Zealand, India, Eire, Malta, the United States of America, Brazil, Chile, China, Denmark, France, the Netherlands, Norway, Sweden and the Union of Soviet Socialist Republics. Including those with consular representatives, who number about 160, there are about fifty countries represented.

For particulars of the various diplomatic and other representatives overseas and in Australia *see* Chapter XXVIII.—Miscellaneous. Full details of British and foreign representation in Australia—diplomatic and consular—may be obtained from a publication issed by the Department of External Affairs, Canberra, entitled " Diplomatic and Consular List, including British Commonwealth Representatives and Trade Commissioners in Australia."

CHAPTER IV.

LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States is given in Official Year Book No. 4 (pp. 235–333), while later alterations are referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation. In previous issues an account is given of the various tenures under which Crown lands may be taken up. (*See* Official Year Book No. 22, pp. 133–195; also par. 2 hereunder for a conspectus of legislation at present in force). Special sections are devoted to closer settlement, the settlement of returned soldiers on the land and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown Lands, Closer Settlement, Returned Soldiers' Settlement and other matters dealt with in this chapter is summarized in the following conspectus :—

STATE LAND LEGISLATION.

<table>
<tr><th>New South Wales.</th><th>Victoria.</th><th>Queensland.</th></tr>
<tr><td colspan="3">CROWN LANDS ACTS.</td></tr>
<tr><td>Crown Lands Act 1913–1945 : Western Lands Act 1901–1945 : Prickly Pear Act 1924–1944.</td><td>Land Acts 1928–1941 : Land (Crown Leases Adjustment) Act 1936 : Land (Residence Area) Act 1935 : Land Act 1941 : Land Settlement (Acquisition) Act 1943 : Agricultural College Act 1944.</td><td>Land Acts 1910–1946 : Upper Burnett and Callide Land Settlement Acts 1923–1932 : Prickly Pear Land Acts 1923–1941 : Sugar Workers' Selections Acts 1923–1936 : Stock Routes Improvement and Animal and Vegetable Pests Destruction Acts 1936–1938 : Stock Routes and Rural Lands Protection Act 1944–1946 : War Service Land Settlement Agreement Act 1945.</td></tr>
<tr><td colspan="3">CLOSER SETTLEMENT ACTS.</td></tr>
<tr><td>Closer Settlement Act 1904–1946.</td><td>Closer Settlement Act 1938.</td><td>Closer Settlement Acts 1906–1941.</td></tr>
<tr><td colspan="3">RESUMPTION ACTS (ALIENATED LAND).</td></tr>
<tr><td>..</td><td>..</td><td>Public Works Land Resumption Acts 1906–1940 : War Service Land Settlement Acquisition Act 1945.</td></tr>
<tr><td colspan="3">MINING ACTS.</td></tr>
<tr><td>Mining Act 1906–1946 : Mining Leases (Validation) Act 1946.</td><td>Mines Acts 1928–1942 : Mines (Petroleum) Acts 1935–1943 : Mines (Minerals) Act 1944.</td><td>Mining Acts 1898–1940 : Mining for Coal and Mineral Oil Acts 1912–1941 : Petroleum Acts 1923–1939 : Miners' Homestead Leases Acts 1913–1939 : Coal Mining Acts 1925–1940 : Mining on Private Land Acts 1909–1929, as amended by the Mining Acts Amendment Act 1930.</td></tr>
</table>

STATE LAND LEGISLATION—*continued.*

New South Wales.	Victoria.	Queensland.
SOLDIERS' SETTLEMENT ACTS.		
Returned Soldiers' Settlement Act 1916–1945: War Service Land Settlement Act 1941–1946.	Soldier Settlement Act 1945.	Discharged Soldiers' Settlement Acts 1917–1945: War Service Land Settlement Acquisition Act 1945: War Service Land Settlement Act 1946: War Service (Sugar Industry) Land Settlement Act 1946.
ADVANCES TO SETTLERS ACTS.		
Government Savings Bank Act 1906–1944: Returned Soldiers' Settlement Act 1916–1945: Rural Bank Agency Act 1934: Farmers' Relief Act 1932–1945: Rural Reconstruction Act 1939.	State Savings Bank Acts 1915–1922: Primary Products Advances Acts 1919–1922: Fruit and Vegetable Act 1928: Farmers Advances Acts and Drought Relief Act 1940: Farm Water Supplies Advances Act 1944: Farmers Advances Act 1944: Drought Relief Act 1944: Drought Relief Act 1946.	State Advances Acts 1916–1934: Co-ordination of Rural Advances and Agricultural Bank Acts 1938–1946: Farmers' Assistance (Debts Adjustment) Acts 1935–1945: Financial Arrangements and Development Aid Acts 1942–1945: Rabbit Acts 1913–1943: Marsupial Proof Fencing Acts 1898–1944: Wire and Wire-netting Advances Act 1927–1944: Wire and Wire-netting Advances Act 1933–1944: Discharged Soldiers' Settlement Acts 1917–1945: War Service Land Settlement Act 1946.

South Australia.	Western Australia.	Tasmania.
CROWN LANDS ACTS.		
Crown Lands Act 1929–1944: Pastoral Act 1936–1944: Marginal Lands Act 1940: Crown Lands Development Act 1943.	Land Act 1933–1946.	Crown Lands Act 1935.
CLOSER SETTLEMENT ACTS.		
Crown Lands Act 1929–1944: Land Settlement Act 1944.	Closer Settlement Act 1927.	Closer Settlement Act 1929–1939
MINING ACTS.		
Mining Act 1930–1946: Mines and Works Inspection Act 1920–1935: Mining (Petroleum) Act 1940: Broken Hill Proprietary Company's Indenture Act 1937: Leigh Creek Coal Act 1942.	Mining Act 1904–1937: Sluicing and Dredging for Gold Act 1899: Petroleum Act 1936–1940: Mines Regulation Act 1906: Mining Development Act 1902–1924: Inspection of Machinery Act 1921: Gold Buyers Act 1921: Coal Mines Regulation Act 1902–1926: Miners' Phthisis Act 1922: Mine Workers Relief Act 1932: Mining Tenements (War-time) Exemptions Act 1942.	Mining Act 1929: Aid to Mining Act 1927: Mines and Works Regulation Act 1915.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania.
SOLDIERS' SETTLEMENT ACTS.		
Discharged Soldiers' Settlement Act 1934–1940.	Discharged Soldiers' Settlement Act 1918: War Service Land Settlement Agreement Act 1945: War Service Land Settlement Agreement (Land Application) Act 1945.	Closer Settlement Act 1929–1939.
AGRICULTURAL GRADUATES SETTLEMENT ACTS.		
Agricultural Graduates Act 1922–1938.	..	..
ADVANCES TO SETTLERS ACTS.		
Irrigation Act 1930–1945: Discharged Soldiers' Settlement Act 1934–1940: State Bank Act 1925–1941: Advances to Settlers Act 1930–1944: Agricultural Graduates Act 1922–1938: Loans for Fencing and Water Piping Act 1938–1940: Vermin Act 1931–1945.	Rural and Industries Bank Act 1944: Rural Relief Fund Act 1935.	State Advances Act 1935: Closer Settlement Act 1929–1939: Unemployed (Assistance to Primary Producers) Relief Act 1930–1934: Farmers' Debt Adjustment Act 1936.

3. **Northern Territory Land Legislation.**—In the Northern Territory of Australia the legislation relating to Crown lands is embodied in the Crown Lands Ordinance 1931–1946: that relating to mining in the Mining Ordinance 1939–1945, the Mining (Royalty Suspension) Ordinance 1943, the Gold Dredging Act 1899, the Mineral Oil and Coal Ordinance 1922–1923, the Mining Development Ordinance 1939–1940, and the Mines Regulation Ordinance 1939: and that relating to advances to settlers in the Encouragement of Primary Production Ordinance 1931–1938.

4. **Australian Capital Territory Land Legislation.**—In the Australian Capital Territory the Ordinances relating to Crown lands are the Leases Ordinance 1918–1937, the City Area Leases Ordinance 1936–1938, the Church Lands Leases Ordinance 1924–1932, and the Leases (Special Purposes) Ordinance 1925–1943.

5. **Administration and Classification of Crown Lands.**—In each of the States there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, which deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory the Administrator, under the control of the Minister for the Interior, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory the administration of the Leases Ordinances is in the hands of the Department of the Interior.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase-money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister.

In each of the States there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory there are several ordinances relative to mining.

6. **Classification of Tenures.**—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory, leases (excepting pastoral and "miscellaneous") are granted in perpetuity, pastoral and "miscellaneous" leases being restricted to periods of not more than 42 and 21 years respectively. The Lands Ordinance provides also for the grant in fee simple of town lands, agricultural lands, garden lands and tropical lands, and for the issue of grazing, occupation and "miscellaneous" licences. The mining leases and holdings are, generally speaking, similar to those of the States. In the Australian Capital Territory leases only are issued.

STATE CROWN LANDS : TENURES.

New South Wales.	Victoria.	Queensland.
	FREE GRANTS AND RESERVATIONS.	
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
	UNCONDITIONAL PURCHASES OF FREEHOLD.	
Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases.	Auction Sales.	..
	CONDITIONAL PURCHASES OF FREEHOLD.	
Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions of various Leasehold Tenures into Conditional Purchases : Purchases of Town Leases, Suburban Holdings, Returned Soldiers' Special Holdings, Residential Leases, Week-end Leases.	Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlement : Special Settlement Areas : Conversions into Selection Purchase Leases.	..
	LEASES AND LICENCES UNDER LAND ACTS.	
Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Selections : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases and Leases under Improvement Conditions : Occupation Licences : Leases of Town Lands : Suburban Holdings : Week-end Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits : Prickly Pear Leases.	Perpetual Leases : Auriferous Lands Licences : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Leases (Mallee) : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships : Land (Residence Areas).	Perpetual Lease Selections : Perpetual Lease Prickly Pear Selections : Perpetual Lease Prickly Pear Development Selections : Grazing Selections : Development Grazing Selections : Prickly Pear Development Grazing Selections : Pastoral Holdings : Preferential Pastoral Holdings : Pastoral Development Holdings : Stud Holdings : Prickly Pear Leases : Forest Grazing Leases : Occupation Licences : Special Leases : Perpetual Town, Suburban and Country Leases.

STATE CROWN LANDS: TENURES—*continued.*

New South Wales.	Victoria.	Queensland.
CLOSER SETTLEMENT.		
Sales by Auction and Tender: After-auction Sales and Tenders: Settlement Purchases: Settlement Purchase Leases: Closer Settlement Leases.	Sales of Land: Conditional Purchase Leases: Conditional Purchase Leases in Mountainous Areas.	Perpetual Lease Selections: Settlement Farm Leases: Perpetual Town, Suburban and Country Leases.
LEASES AND LICENCES UNDER MINING ACTS.		
Holdings under Miners' Rights and Business Licences: Gold-mining Leases: Mineral Leases: Dredging Leases: Special Leases: Mining Purpose Leases: Authorities to Prospect (Section 17).	Holdings under Miners' Rights: Gold-mining Leases: Mineral Leases: Water Right Licences: Petroleum Prospecting Licences: Petroleum Mineral Leases.	Holdings under Miners' Rights: Permits to Prospect for Petroleum: Petroleum Leases: Licences to Prospect for Coal and Mineral Oil: Gold-mining Leases: Mineral Leases: Coal-mining Leases: Business Areas: Residence Areas: Miners' Homestead Leases and Miners' Homestead Perpetual Leases.
SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.		
Soldiers' Group Purchases: Group Purchase Leases: Returned Soldiers' Special Holding Leases: Returned Soldiers' Special Holding Purchases: also Purchases and Leases under Crown Lands Act and Allied Acts of lands set apart for application by discharged soldiers exclusively.	(Same Tenures as under the Land and Closer Settlement Acts. *See also* Soldier Settlement Act 1945 above.)	1914–18 War—Perpetual Lease Selections: Perpetual Town and Suburban Leases: 1939–45 War—Perpetual Lease Selections and Grazing Selections.

South Australia.	Western Australia.	Tasmania.
FREE GRANTS AND RESERVATIONS.		
Free Grants: Reservations.	Free Grants: Reservations.	Free Grants: Reservations.
UNCONDITIONAL PURCHASES OF FREEHOLD.		
Auction Sales: By Private Contract (Land passed at Auction).	Auction Sales.	Auction Sales: After-auction Sales: Sales of Land in Mining Towns.
CONDITIONAL PURCHASES OF FREEHOLD.		
Agreements to Purchase: Special Agreements to Purchase (40 years' term): Homestead Blocks: Town of Whyalla Allotments in fee-simple.	Conditional Purchases with Residence: Conditional Purchases without Residence: Conditional Purchases by Direct Payment: Conditional Purchase of Land for Vineyards, etc.: Conditional Purchases by Pastoral Lessees: Conditional Purchases of Grazing Lands: Homestead Farms: Special Settlement Leases.	Selections for Purchase: Additional Selections for Purchase: Sales by Auction: Sales by Private Contract: After-auction Sales: Special Settlement Areas.

STATE CROWN LANDS: TENURES—*continued.*

South Australia.	Western Australia.	Tasmania.
Leases and Licences under Land Acts.		
Perpetual Leases: Special Perpetual Leases (Free Period): Perpetual Leases of Homestead Blocks: Miscellaneous Leases: Licences: Pastoral Leases: Irrigation Blocks: Town Allotments in Irrigation Areas and Town of Whyalla: Forest Leases: Perpetual Leases Marginal Lands.	Pastoral Leases: Special Leases: Leases of Town and Suburban Lands: Cropping Leases.	Grazing Leases: Pastoral Leases: Leases of Land covered with Button Grass, etc.: Leases of Mountainous Land: Miscellaneous Leases: Temporary Licences: Occupation Licences: Residences Licences: Business Licences: Forest Leases, Licences and Permits
Closer Settlement.		
Sales by Auction: Agreements to Purchase: Perpetual Leases: Miscellaneous Leases: Licences.	Conditional Purchases: Town and Suburban Areas.	Leases with Right of Purchase: Special Sales.
Leases and Licences under Mining Acts.		
Holdings under Miners' Rights: Search Licences: Occupation Licences: Gold Leases: Mineral Leases: Coal Leases: Oil Licences: Dredging Leases: Business Licences: Residence Areas: Miscellaneous Leases (Salt and Gypsum).	Holdings under Miners' Rights: Gold-mining Leases: Mineral Leases: Business Areas: Residence Areas: Miners' Homestead Leases.	Holdings under Miners Rights. Prospectors' Licences: Gold-mining Leases: Mineral Leases.
Settlement of Discharged Soldiers and Sailors.		
Perpetual Leases: Pastoral Leases: Agreements to Purchase: Miscellaneous Leases: Licences.	Ordinary Tenure: Special Tenure.	Free Grants: Ordinary Tenure: Special Tenure.
Agricultural Graduates Settlement.		
Agreements to Purchase: Perpetual Leases.	..	..

§ 2. Free Grants and Reservations.

1. **New South Wales.**—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee-simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During 1944–45 and 1945–46 7,308 and 3,907 acres respectively were permanently reserved or dedicated for miscellaneous parks and recreation reserves and for other public purposes, the number of separate localities or areas being 67 and 78 respectively. The areas reserved at 30th June, 1945 and 1946 were as follows :—

AREAS TEMPORARILY AND PERMANENTLY RESERVED : NEW SOUTH WALES.

(Acres.)

At 30th June—	Travelling Stock.	Pending Classification and Survey.	Forest Reserves.	Water and Camping Reserves.	Mining Reserves.	Recreation and Parks.	Other Reserves.	Total Area Reserved (a)
1945 ..	5,330,487	3,809,444	2,074,792	834,478	1,225,073	419,113	4,053,496	17,746,883
1946 ..	5,329,493	3,893,786	2,076,631	835,783	1,224,836	419,816	4,092,065	17,872,410

(a) Includes areas occupied under annual, special, scrub or forestry leases, or under occupation licences or permissive occupancy, included under the appropriate leasehold tenures in following sections.

During 1943–44 legislation was passed to reserve permanently the Crown lands within the snow belt and adjacent Crown lands as a National Park, to be known as the Kosciusko State Park. A trust was formed to control and develop the area—approximately one and a quarter million acres. Shortages of manpower and materials have to date prevented any substantial progress in developmental works.

2. **Victoria.**—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes, and may except any area of Crown lands from occupation for mining purposes under any miner's right.

(iii) *Areas Granted and Reserved.* During 1945 and 1946, 14 and 1 acres respectively were granted without purchase. The areas both temporarily and permanently reserved at the end of 1945 and 1946 were as follows :—

AREAS TEMPORARILY AND PERMANENTLY RESERVED : VICTORIA.

(Acres.)

At 31st December—	Roads.	Water Reserves.	Agricultural Colleges, etc.	Forest and Timber Reserves.		Reserves in the Mallee.	Other Reserves.	Total Area Reserved.
				Under Forests Acts. (a)	Under Land Acts.			
1945 ..	1,794,218	316,056	8,434	4,904,350	156,696	410,000	547,288	8,137,051
1946 ..	1,794,218	316,012	8,434	4,936,911	156,696	410,000	549,131	8,171,402

(a) Timber Reserves, included in figures, amounted to 717,582 acres in each year.

(iv) *Revoking of Agricultural Reservations.* Under the Agricultural Colleges Act 1944, the lands on which the agricultural colleges and experimental farms at Longerenong (2,386 acres) and Dookie (6,048 acres) are established, are permanently reserved as sites for the purposes of State Agricultural Colleges, and the remainder of the lands previously reserved has become unalienated for treatment as such under the Land Acts. *See also* § 5, para. 3 following.

3. **Queensland.**—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Act, land to be used for the purpose of any undertaking under that Act may be vested in fee-simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During 1945 and 1946 respectively the areas granted in fee-simple without payment were nil and 15 acres, the area set apart as reserves 203,419 and 431,140 acres, and reserves cancelled 164,528 and 125,909 acres. The areas reserved, including roads, at the end of 1945 and 1946 were as follows :—

AREAS RESERVED : QUEENSLAND.

(Acres.)

At 31st December—	Timber Reserves.	State Forests and National Parks.	Aboriginal Reserves.	Streets, Surveyed Roads and Stock Routes.	General.	Total Area Reserved.
1945	3,055,123	4,069,433	5,938,476	3,425,000	5,655,357	22,143,389
1946	3,075,901	4,123,325	6,170,476	3,436,000	5,653,918	22,459,620

4. **South Australia**—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee-simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for the use and benefit of aborigines, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During 1944–45 and 1945–46 respectively, free grants were issued for areas of 75 and 42 acres, and reserves comprising 17,613 and 16,254 acres were proclaimed. At 30th June, 1945 and 1946, the total area of surveyed roads, railways and other reserves was 20,239,878 and 20,256,172 acres respectively including at each date, 16,726,400 acres in the north-west of the State set apart as an aboriginal reserve in 1921, and 595,200 acres at Ooldea, adjoining the transcontinental railway, reserved for a similar purpose in 1940.

5. **Western Australia.**—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee-simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the years ended 30th June, 1945 and 1946, approximately 31,960 and 5,187,802 acres respectively were reserved for various purposes. At 30th June, 1946 (figures at 30th June, 1945, in parenthesis), the total area reserved was 54,816,013 (49,628,211) acres, comprising State forests, 3,395,586 (3,392,926) acres, timber reserves 1,778,111 (1,778,111) acres, and other reserves 49,642,316 (44,457,174) acres.

6. **Tasmania.**—(i) *Free Grants.* No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act of 1916, returned soldiers who applied prior to 31st March, 1922, were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* The total area reserved at the end of 1944, 1945 and 1946 was 2,828,033, 2,885,036 and 2,888,657 acres respectively excluding 22,042, 22,310 and 22,319 acres respectively of land occupied by Commonwealth and State Departments.

7. **Northern Territory.**—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands not subject to any right of or contract for purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the land so resumed.

(ii) *Areas Reserved.* The total area of reserves at 30th June, 1945 and 1946, respectively was 69,257 and 69,334 square miles, comprising aboriginal native, 67,258 and 67,335 square miles; and other reserves, 1,999 square miles.

8. **Summary.**—The following table shows the total areas reserved in each State, and the grand totals, for the years 1942 to 1946 :—

AREAS RESERVED.

('000 Acres.)

Year.	N.S.W. (*a*)	Victoria. (*b*)	Q'land. (*b*)	S. Aust. (*a*)	W. Aust. (*a*)	Tasmania. (*b*)	Nor. Terr. (*a*)	Total.
1942 ..	18,009	8,209	21,694	20,202	49,161	2,817	44,315	164,407
1943 ..	17,566	8,213	21,705	20,219	49,231	2,828	44,324	164,086
1944 ..	18,319	8,216	21,720	20,222	49,596	2,828	44,324	165,225
1945 ..	17,747	8,137	22,143	20,240	49,628	2,885	44,324	165,104
1946 ..	17,872	8,171	22,460	20,256	54,816	2,889	44,374	170,838

(*a*) At 30th June. (*b*) At 31st December.

§ 3. Unconditional Purchases of Freehold.

1. **New South Wales.**—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-Auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee-simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction. Areas not exceeding 5 acres in extent may be sold to recognized religious bodies and public authorities at prices determined by the local land board.

(iv) *Improvement Purchases.* The owner of improvements in land, in authorized occupation by residence under any Mining or Western Lands Act of land within a gold-field or mineral field, may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed ¼ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Areas Sold.* During the year ended 30th June, 1946 (figures for year ended 30th June, 1945, in parenthesis), the total area sold was 610 (1,675) acres, of which 4 (12) acres were sold by auction and 107 (56) acres as after-auction purchases, while 24 (22) acres were sold as improvement purchases and 475 (1,585) acres as special purchases. The amount realized for the sale of the whole area was £17,885 (£17,670).

2. **Victoria**—(i) *General.* Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction may be sold by auction in fee-simple at an upset price not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price ; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas sold at Auction and by Special Sales.* During 1945 and 1946 totals of 576 and 954 acres respectively were disposed of under this tenure, 469 and 672 acres being country lands, while 107 acres of town and suburban lands were sold by auctions each year.

3. **Queensland.**—(i) *General.* From 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929 but this provision was repealed by the Act of 1932.

(ii) *Areas Sold, etc.* During 1945, unconditional selections made freehold totalled 2,266 acres. In 1946 no unconditional selections were made freehold.

4. **South Australia.**.—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(*a*) special blocks ; (*b*) Crown lands which have been offered for lease and not taken up within two years ; (*c*) town lands ; and (*d*) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.

(ii) *Areas Sold, etc.* During the years ended 30th June, 1945 and 1946, the area of town lands and special blocks sold by auction was 31 and 30 acres respectively. In addition, 28,067 and 49,985 acres respectively were sold at fixed prices, and the purchases of 67,872 and 43,915 acres respectively on credit were completed, making a total of 95,970 and 93,930 acres respectively.

5. **Western Australia.**.—(i) *Sales by Auction.* Town, suburban and village lands must be sold by auction after being surveyed into lots and notified in the *Gazette.* Ten per cent. of the purchase-money must be paid in cash together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.

(ii) *Areas Sold.* During the years ended 30th June, 1945 and 1946, the area of town and suburban allotments sold by auction was 88 and 116 acres in 186 and 260 allotments respectively.

6. **Tasmania.**.—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-Auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

§ 4. Conditional Purchases of Freehold.

1. **General.**—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (see No. 22, pp. 141–9).

2. **New South Wales.**—At 30th June, 1945 and 1946, the total number of incomplete conditional purchases in existence was 41,080 and 40,881 respectively, covering an area of 13,502,537 and 13,315,504 acres respectively. The following table gives particulars of conditional purchases, including non-residential conditional purchases and special area conditional purchases, for the years ended 30th June, 1945 and 1946, together with the total area for which deeds have been issued :—

CONDITIONAL PURCHASES : NEW SOUTH WALES.

Year ended 30th June—	Applications Received.(a)	Applications Confirmed.(a)		Areas for which Deeds have been Issued.	
	Number.	Number.	Area.	During the Year.	To end of Year.
			Acres.	Acres.	Acres.
1945	42	11	1,135	204,654	31,452,180
1946	60	26	1,192	189,744	31,686,702

(a) Excludes conversions from other tenures, 1944–45, 422 comprising 68,962 acres ; 1945–46, 559 comprising 83,423 acres.

3. **Victoria.**—Excluding selections in the Mallee country, the total area purchased conditionally in 1945 and 1946 was 3,673 and 3,349 acres respectively, all with residence. The number of selectors was 25 and 30 respectively. There were no selections in the Mallee in 1945 and 1946.

In addition the final payments were made during 1945 and 1946 on conditional purchases comprising 137 and 197 acres of Mallee lands.

4. **Queensland.**—The following selections were made freehold during 1945 and 1946 :—Agricultural farms, 212,755 and 171,075 acres ; agricultural homesteads, 602 and 133 acres ; prickly pear selections, 27,889 and 48,268 acres ; and prickly pear development selections 8,442 and 1,021 acres.

5. **South Australia.**—The land allotted under agreements to purchase during 1945–46 (figures for 1944–45 in parenthesis) was 11,278 acres, comprising Eyre's Peninsula railway lands 1,547 (29) acres, closer settlement lands 740 (859) acres, soldiers' acquired lands 2,276 (689) acres, surplus lands 6,606 (nil) acres, and other Crown lands 109 (322) acres.

6. **Western Australia.**—During the year ended 30th June, 1946 (figures for the year ended 30th June, 1945, in parenthesis) the number of holdings conditionally alienated was 354 (321), the total area involved being 228,906 (231,321) acres, comprising conditional purchases by deferred payments with residence of 225,641 (226,349) acres and free homestead farms 3,265 (4,972) acres. Under the heading "deferred payments (with residence)" are included conditional purchases of grazing lands.

In addition, Crown grants were issued during 1945–46 (1944–45 in parenthesis) for the following selections, the prescribed conditions having been complied with :—Free homestead farms 10,543 (7,457) acres and conditional purchases 110,066 (110,899) acres.

7. **Tasmania.**—During 1945–46 (figures for 1944–45 in parenthesis) conditional purchases of 27,428 (23,860) acres were completed. The total area sold conditionally was 4,598 (3,089) acres, comprising selections for purchase 4,288 (2,842) acres, and town and suburban allotments 310 (247) acres. The numbers of applications received and confirmed were 35 (34) and 158 (94) respectively.

§ 5. Leases and Licences under Land Acts.

1. **General.**—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in preceding issues of the Official Year Book (see No. 22, pp. 149–63).

2. **New South Wales.**—On 30th June, 1946, the area of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission, and the Western Lands Commission, comprised 112,545,323 acres of Crown lands, compared with 112,225,306 acres at the close of the previous year. Of the total area at 30th June, 1946, 77,327,534 acres were held under the Western Lands Act, and of the remainder, 23,295,972 acres were held under perpetual lease and 11,921,817 acres under other forms of lease, licence and permissive occupancy.

The following table shows the areas held under various descriptions of leases and licences at the end of 1944–45 and 1945–46 :—

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE : NEW SOUTH WALES.(a)

(Acres.)

Particulars.	1945.	1946.
Areas taken up under Crown Lands or Closer Settlement Acts.		
Occupation licences—ordinary	549,809	530,867
preferential	242,070	219,825
Conditional leases	11,960,746	11,909,374
Conditional purchase leases	161,796	161,555
Settlement leases	2,775,957	2,773,054
Improvement leases	63,423	68,264
Annual leases	458,675	514,276
Scrub leases	87,209	73,803
Snow leases	612,235	653,135
Special leases	928,151	957,383
Inferior land leases	15,460	15,460
Residential leases (on gold and mineral fields)	5,344	5,288
Church and school lands	11	11
Permissive occupancies (ordinary)	2,054,533	2,151,874
(Closer Settlement Acts)	55,460	49,793
Prickly pear leases	163,916	148,978
Crown leases	7,326,563	7,339,156
Homestead farms	4,628,919	4,735,123
Homestead selections and grants	1,671,047	1,671,584
Closer settlement leases (Closer Settlement Acts)	21,325	24,756
Settlement purchase leases (Closer Settlement Acts)	508,979	751,682
Suburban holdings	54,109	53,910
Week-end leases	206	206
Group purchase leases (Closer Settlement Acts)	90,312	160,391
Leases of town lands	65	66
Returned soldiers' special holdings	14,619	14,619
Irrigation areas	238,535	233,356
Leases, Licences and Permissive Occupancies under Western Lands Act.		
Conditional leases	98,025	98,025
Leases being issued—occupational leases	165,496	172,167
Perpetual leases	49,863,037	50,719,083
Other long-term leases	23,863,937	21,700,952
Permissive occupancies	1,191,458	2,862,945
Preferential occupation licences	2,353,879	1,774,362
Total	112,225,306	112,545,323

(a) Excludes mining leases and permits and forest leases and occupation permits.

During 1944–45, 510,206 acres were taken up under various forms of leasehold under the Crown Lands and Closer Settlement Acts, permissive occupancies (243,592 acres) being the largest group. During 1945–46, 356,162 acres were taken up under lease, permissive occupancies (125,526 acres) and snow leases (91,480 acres) being the largest groups. Leases, licences and permissive occupancies under the Western Lands Act, amounting to 3,108,853 acres in 1944–45 and 3,597,696 acres in 1945–46 made the grand total taken up in 1944–45 3,619,059 acres, and in 1945–46, 3,953,858 acres. Perpetual leases (1,312,617 acres) and preferential occupation licences (1,178,002 acres) in 1944–45 and perpetual leases (895,039 acres) and permissive occupancies (2,269,829 acres) in 1945–46 were the largest groups.

3. **Victoria.**—The area of Crown lands occupied under leases and licences in each of the years 1945 and 1946 is given in the following table :—

AREAS OCCUPIED UNDER LEASE OR LICENCE : VICTORIA.

(Acres.)

Particulars.	1945.	1946.
Grazing licences—Other than Mallee	5,738,112	5,768,625
Mallee lands	2,781,623	4,184,420
Auriferous lands (licences)	16,343	16,334
Perpetual leases—Other than Mallee	16,550	16,550
Mallee lands	67,444	67,444
Swamp lands (leases)	3,971	4,020
Agricultural college lands	(a) 66,974	(a) 66,974
Total	8,691,017	10,124,367

(a) Transferred under Agricultural Colleges Act 1944 to control of Department of Lands and Survey *See also* § 2, para. 2 (iv) *ante*.

4. **Queensland.**—The total area occupied under lease or licence, excluding mining leases, at the end of 1945 and 1946 was as follows :—

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 31st DECEMBER : QUEENSLAND.

(Acres.)

Particulars.	1945.	1946.
Pastoral leases	248,626,480	243,801,960
Occupation licences	13,914,120	17,986,440
Grazing selections and settlement farm leases ..	82,894,669	83,248,538
Special purpose leases—Crown land	475,452	466,208
Reserves	389,629	431,999
Perpetual lease selections and perpetual lease prickly pear selections	6,361,709	6,376,577
Auction perpetual leases, etc.	29,178	29,640
Prickly pear leases	23,960	11,080
Forest grazing leases (of reserves)	1,973,800	1,972,800
Total	354,688,997	354,325,242

During 1945 and 1946 the areas taken up were 4,007,546 acres and 2,614,284 acres respectively. Pastoral leases amounted to 3,025,440 acres during 1945 and to 1,561,560 acres during 1946.

5. **South Australia.**—The total area held under lease or licence, except mining lease and licence, at 30th June, 1945 and 1946, was respectively 133,400,975 acres and 134,233,765 acres, of which pastoral leases, 113,554,798 acres in 1945 and 114,131,213 acres in 1946, constituted the major proportion. The total area leased during 1944–45 was 955,106 acres, and during 1945–46 755,583 acres, pastoral, grazing and cultivation leases constituting 717,953 acres and 504,528 acres thereof.

6. **Western Australia.**—At 30th June, 1945, the total area held under lease or licence issued by the Lands Department amounted to 209,574,144 acres, of which 207,252,158 acres were under pastoral lease. Corresponding figures for 1946 were 209,104,036 acres and 206,708,452 acres. During 1944–45 the total area of leases issued was 1,949,169 acres (pastoral, 1,840,801 acres). Leases issued in 1945–46 totalled 1,163,490 acres (pastoral, 1,044,497 acres).

7. **Tasmania.**—Crown lands leased at 31st December, 1944, for other than mining purposes amounted to 2,800,008 acres, of which 2,104,864 acres were leased for pastoral purposes. At 31st December, 1945, corresponding figures were 2,771,362 acres and 2,112,992 acres and at 31st December, 1946, 2,740,842 acres and 2,098,617 acres. The area of land leased for pastoral purposes during 1943–44 was 131,679 acres, for 1944–45 131,617 acres, and for 1945–46, 94,967 acres.

8. **Northern Territory.**—At 30th June, 1945, the total area held under lease, licence and permit was 163,496,527 acres, of which pastoral leases accounted for 117,547,520 acres and grazing licences 43,679,909 acres. At 30th June, 1946, the total area under lease, etc., was 159,205,281 acres, and pastoral leases and grazing licences, 108,626,560 acres and 48,371,808 acres respectively. Total annual rentals for all leases were £30,390 and £29,202, in 1944–45 and 1945–46 respectively.

9. **Australian Capital Territory.**—The number of leases granted under the City Area Leases Ordinance 1936–1938 to 30th June, 1945 and 1946 (excluding leases surrendered and determined), was 581 and 673 respectively, representing a capital value of £244,558 and £266,928. There were 25 new leases granted during 1944–45 and 96 during 1945–46. The total area held under grazing, etc., lease and licence (including Jervis Bay area) amounted to 329,040 acres in 1945 and 329,260 acres in 1946.

Fourteen leases have been granted under the Church Lands and Special Purposes Ordinances for church and scholastic purposes. In addition, a lease in perpetuity has been granted under the Church of England Land Ordinance 1926 for church purposes.

10. **Summary.**—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1942 to 1946 :—

AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.

('000 acres.)

Year.	N.S.W. (*a*)	Victoria. (*b*)	Q'land. (*b*)	S. Aust. (*a*)	W. Aust. (*a*)	Tas. (*b*)	N.T. (*a*) (*c*)	A.C.T. (*c*) (*d*)	Total.
1942	111,455	8,147	345,489	130,965	208,914	2,749	133,558	322	941,599
1943	111,555	9,595	345,517	130,694	209,302	2,814	145,108	320	954,821
1944	111,099	9,463	350,313	132,928	209,916	2,800	156,913	329	973,761
1945	112,225	8,691	354,689	133,401	209,574	2,771	163,497	329	985,177
1946	112,545	10,124	354,325	134,234	209,104	2,741	159,205	329	982,607

(*a*) At 30th June. (*b*) At 31st December. (*c*) Leases and licences for all purposes
(*d*) Includes Jervis Bay area.

§ 6. Leases and Licences under Mining Acts.

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (see No. 22, pp. 170–7).

2. **New South Wales.**—The following table gives particulars of operations on Crown lands for the year 1945–46 :—

AREAS TAKEN UP UNDER MINING ACTS : NEW SOUTH WALES, 1945–46.

(Acres.)

Purposes for which Issued or Occupied.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
Gold-mining	839	10,919
Mining for other minerals	7,163	165,838
Authorities to prospect	43,282	2,232,840
Other purposes	513	7,865
Total	51,797	2,417,462

3. **Victoria.**—The following table gives particulars of the number of leases and licences granted during 1945 and 1946, and the area under occupation for mining purposes at the end of each year :—

AREAS TAKEN UP UNDER MINING ACTS : VICTORIA.

Particulars.	1945.		1946.	
	Leases and Licences Granted.	Total Areas Occupied at End of Year.	Leases and Licences Granted.	Total Areas Occupied at End of Year.
	No.	Acres.	No.	Acres.
Gold-mining leases	27	26,167	56	24,023
Petroleum prospecting licences	..	604,806	..	604,806
Coal leases	64	(a)13,048	86	(a)13,048
Other leases and licences		4,025		3,981
Total	91	648,046	142	645,858

(a) Includes State Coal Mine area 7,575 acres and State Electricity Commission area 2,800 acres.

The area covered by licences, etc., issued in 1945 was 1,554 acres, and in 1946, 3,155 acres. The rent, fees, etc., were £325 and £614 in 1945 and 1946 respectively.

4. **Queensland.**—During 1945 and 1946, the number of miners' rights issued was 1,890 and 2,622 respectively, and of business licences 4 in each year. The following table gives particulars of the areas of lands taken up under lease or licence and the total areas occupied for 1945 and 1946. In addition, an area estimated at 25,000 acres was held under miners' rights and dredging claims.

AREAS TAKEN UP UNDER MINING ACTS : QUEENSLAND.

(Acres.)

Particulars.	1945.		1946.	
	Areas Taken up during year.	Total Areas occupied at end of year.	Areas Taken up during year.	Total Areas occupied at end of year.
Gold-mining	341	2,833	509	3,176
Mining for other minerals	3,576	25,125	1,177	25,649
Miners' homestead leases	2,730	416,688	2,564	407,267
Petroleum-prospecting permits ..	64,000	408,500	6,400	414,900
Coal prospecting areas	2,439	7,419	4,939	7,819
Total	73,086	860,565	15,589	858,811

The area of land held under lease only, at 31st December, 1945 and 1946, was 444,646 and 436,092 acres respectively.

5. **South Australia.**—The following table gives particulars of operations for 1944–45 and 1945–46 :—

AREAS TAKEN UP UNDER MINING ACTS : SOUTH AUSTRALIA.

(Acres.)

Particulars.	1944-45.		1945-46.	
	Areas Taken up during year.	Total Areas occupied at end of year.	Areas Taken up during year.	Total Areas occupied at end of year.
Gold-mining leases	52	430	40	372
Mineral and miscellaneous leases ..	3,698	60,486	9,224	72,357
Claims	3,661	8,823	5,777	12,977
Occupation licences	..	..	3	31
Oil exploration licences	2,560,000	2,560,000	4,576,000	4,576,000
Total	2,567,411	2,629,739	4,591,044	4,661,737

6. **Western Australia.**—The following table gives particulars of operations for 1945 and 1946. The figures exclude holdings under miners' rights and mineral oil licences. Of the areas shown as taken up in 1946 (1945 in parenthesis), the area under lease was 4,614 (1,565) acres for gold-mining, 24 (77) for mining for other minerals, 125 (150) for miners' homesteads, and 94 (102) for miscellaneous—a total of 4,857 (1,894) acres. The balance was taken up under licences.

AREAS TAKEN UP UNDER MINING ACTS : WESTERN AUSTRALIA.

(Acres.)

Particulars.	1945.		1946.	
	Areas Taken up during year.	Total Areas occupied at end of year.	Areas Taken up during year.	Total Areas occupied at end of year.
Gold-mining	10,732	30,037	25,856	40,924
Mining for other minerals	1,337	48,221	1,423	51,488
Other purposes	319	38,022	275	37,981
Total	12,388	116,280	27,554	130,393

7. **Tasmania.**—During 1946 (figures for 1945 in parenthesis), the number of leases issued was 40 (50) of which 2 (2) were for gold-mining, covering 30 (50) acres; and 9 (36) for tin-mining, covering 498 (667) acres. The following table gives particulars for 1945 and 1946.

AREAS TAKEN UP UNDER MINING ACTS : TASMANIA.

(Acres.)

Particulars.	1945.		1946.	
	Areas Taken up during year.	Total Areas occupied at end of year.	Areas Taken up during year.	Total Areas occupied at end of year.
Gold-mining	50	955	30	992
Mining for other minerals	1,540	13,510	538	13,291
Licences to search for coal or oil ..	..	..	..	..
Mining for coal	186	5,563	619	5,563
Other purposes	1,142	3,889	515	4,234
Total	2,918	23,917	1,702	24,080

8. **Northern Territory.**—At 30th June, 1946, the number and acreage of holdings under mining lease and tenement were as follows :—

MINING LEASES AND TENEMENTS : NORTHERN TERRITORY, 30th JUNE, 1946.

Particulars.	No.	Acres.
Gold-mining leases	195	3,199
Mineral leases	129	2,946
Gold dredging claims	6	1,800
Tin dredging claims	1	300
Mineral prospecting areas	28	459
Gold prospecting areas	17	237
Business and residence areas	171	46
Miscellaneous	53	439
Total	600	9,426

At 30th June, 1945, gold-mining leases numbered 160 (2,774 acres) and mineral leases 127 (2,753 acres).

9. **Summary.**—The following table shows the areas taken up, or for which leases and licences for mining purposes were issued during the year, and the total areas occupied. for the years 1942 to 1946 :—

AREAS TAKEN UP UNDER MINING ACTS.

(Acres.)

Year.	N.S.W. (*a*)	Victoria.	Q'land. (*b*)	S. Aust. (*a*) (*b*)	W. Aust. (*c*)	Tasmania. (*b*)	Total (*d*)
AREAS TAKEN UP OR FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.							
1942 ..	(*e*)	130,949	10,124	3,545	12,222	3,087	(*e*)
1943 ..	(*e*)	976	350,471	3,184	9,883	2,577	(*e*)
1944 ..	(*e*)	1,755	16,393	2,489	17,202	2,749	(*e*)
1945 ..	(*e*)	1,554	73,086	2,567,411	12,388	2,918	(*e*)
1946 ..	51,797	3,155	15,589	4,591,044	27,554	1,702	4,690,841
TOTAL AREAS OCCUPIED AT END OF YEAR.							
1942 ..	(*e*)	648,384	446,425	70,463	112,230	25,586	(*e*)
1943 ..	(*e*)	648,256	781,624	70,427	111,166	26,158	(*e*)
1944 ..	(*e*)	647,255	798,916	67,195	107,150	29,992	(*e*)
1945 ..	(*e*)	648,046	860,565	2,629,739	116,280	23,917	(*e*)
1946 ..	2,417,462	645,858	858,811	4,661,737	130,393	24,080	8,738,341

(*a*) Year ended 30th June. (*b*) Excludes lands held under miners' rights only. (*c*) Excludes holdings under miners' rights and mineral oil licences. (*d*) Excludes Northern Territory. (*e*) Not available.

§ 7. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in preceding issues of the Official Year Book (see No. 22, pp. 163–9).

2. **New South Wales.**—Since the inception of closer settlement in 1905 to 30th June. 1946, 1,857 estates totalling 4,197,540 acres have been purchased by the Crown at the cost of £15,355,585 for purposes of closer settlement of civilians and returned soldiers. The total areas set apart, and the values thereof, to 30th June, 1945 and 1946, are shown below :—

CLOSER SETTLEMENT AREAS (*a*) : NEW SOUTH WALES.

To 30th June—	Areas.			Values.		
	Acquired Lands.	Adjoining Crown Lands.	Total.	Cost of Acquired Lands.	Value of Adjoining Crown Lands.	Total.
	Acres.	Acres.	Acres.	£	£	£
1945	4,145,032	206,207	4,351,239	15,107,573	357,689	15,465,262
1946(*b*) ..	4,145,032	206,553	4,351,585	15,107,573	359,332	15,466,905

(*a*) Includes 70 long-term leases resumed for closer settlement, but excludes areas acquired for village sites, 3,665 acres. (*b*) Excludes 52,508 acres comprising three estates acquired at purchase price of £248,012 for War Service Land Settlement, 1939–45 War, but not set apart at 30th June, 1946.

The following table gives particulars regarding the disposal of the farms by closer settlement purchase at 30th June, 1945 and 1946 :—

CLOSER SETTLEMENT ALLOTMENTS : NEW SOUTH WALES.

At 30th June—	Farms Allotted to Date.			Total Amount received in respect of Closer Settlement Farms.
	Number.	Area.	Capital Value.	
		Acres.	£	£
1945	9,098	4,158,288	15,146,308	15,212,216
1946	9,127	4,168,535	15,197,447	15,779,548

3. **Victoria.**—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939, all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt made payable over an extended period. As separate details are not now available, the following statement shows the operations under the provisions of the Closer Settlement Acts to 30th June, 1938 :—

CLOSER SETTLEMENT : VICTORIA.

(INCLUDING IRRIGATED AREAS.)

To 30th June—	Total Area Acquired.	Total Cost of Purchases. (a)	How Made Available for Settlement.					Number of Farms, etc.	Total Receipts (Land and Advances).	Repayments of Principal (Land and Advances).	Area Available for Settlement at 30th June.
			Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (b)	Roads and Reserves.				
	Acres.	£	Acres.	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.
1938	1,402,568	10,244,023	1,162,676	790	3,484	86,599	14,775	8,722	14,297,492	4,779,268	1,006

(a) Includes value of Crown Lands taken over. (b) Includes all land sold other than under Conditional Purchase Lease.

In the foregoing table the area and cost of land acquired for closer settlement purposes include, in addition to 133,128 acres purchased for £1,246,722 and transferred subsequently to discharged soldiers, a total area of 512,757 acres costing £4,125,822 which was purchased originally for the settlement of discharged soldiers.

4. **Queensland.**—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." The total area acquired to 31st December, 1934, was 970,778 acres, costing £2,292,881. At the same date the area allotted amounted to 915,690 acres distributed over 3,048 selections, consisting of 2,155 agricultural farms, 257 unconditional selections, 544 perpetual lease selections, 9 prickly pear selections, 6 perpetual lease prickly pear selections and 77 settlement farm leases. An area of 13,038 acres was sold by auction.

5. **South Australia.**—The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it had been dealt with to 30th June, 1945 and 1946 :—

CLOSER SETTLEMENT : SOUTH AUSTRALIA.

(Acres.)

To 30th June—	Area of Lands Re-purchased (excluding land afterwards set apart for other purposes).	Agreements with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Miscellaneous Leases.	Sold.	Remainder Unoccupied (including roads and land in course of allotment).
			Right of Purchase.	Perpetual Lease.				
1945 ..	833,038	382,260	..	1,353	120,139	22,115	302,674	4,497
1946 ..	833,038	361,509	..	1,353	118,525	24,940	324,022	2,689

The total area re-purchased at 30th June, 1945 and 1946, was 927,582 acres at a cost of £2,890,135. Included in these figures are 64,766 acres purchased for £282,762 and afterwards set apart for discharged soldiers, 3,214 acres reserved for forest and waterworks purposes, the purchase-money being £16,185, and also 26,563 acres of swamp and other lands which were purchased for £111,580 in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 828,541 acres in 1945 and 830,349 in 1946 have been allotted to 2,819 persons in each year, the average area to each being 294 acres.

6. **Western Australia.**—The total area acquired for closer settlement up to 30th June, 1946, was 915,893 acres, costing £1,192,891. Of this area, 20,972 acres have been set aside for roads, reserves, etc., leaving a balance of 894,921 acres available for selection. Particulars of operations under the Act for the year ended 30th June, 1946 (figures for year ended 30th June, 1945, in parenthesis), are as follows :—Area selected during the year 3,081 (1,678) acres; number of farms, etc., allotted to date 1,678 (1,673); total area occupied to date 788,326 (785,245) acres; balance available for selection 96,415 (99,496) acres; and total revenue £1,185,715 (£1,146,477).

7. **Tasmania.**—Up to 30th June, 1945 and 1946, 37 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £368,210 and the total area acquired amounting to 103,363 acres, including 12,053 acres of Crown lands. The number of farms occupied at 30th June, 1945 and 1946, was 212 and 190 respectively.

8. **Summary.**—Because of the amalgamation, in some States, of closer settlement records with those of other bodies it is not possible to obtain up-to-date figures of the total area in Australia acquired and set aside for closer settlement purposes, and of the cost thereof. The following figures are aggregations of the State totals as at the latest dates available, and should be regarded as approximations intended only to give some idea of the extent of the scheme :—Area acquired and set aside, 8,700,000 acres; cost thereof, £32,000,000.

§ 8. Settlement of Returned Soldiers and Sailors : 1914-18 War.

1. **General.**—Information regarding the methods adopted in each State following the commencement of the 1914–18 War for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired

is given in earlier issues of the Official Year Book (see No. 13, pp. 1016–23, and No. 18, pp. 187–9). Later modifications were made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

Particulars respecting the position of soldier settlement in each State at the latest available date are given in the following paragraphs.

2. **New South Wales.**—At 30th June, 1946 (figures at 30th June, 1945, in parenthesis), the area set apart for soldiers of the 1914–18 War was 9,834,747 (9,769,651) acres, of which 1,762,780 (1,710,272) acres comprised acquired land purchased at a cost of £8,361,968 (£8,113,956). The number of settlers to whom farms, etc., had been allotted up to 30th June, 1946, was 9,799 (9,852). Five thousand, three hundred and sixty-nine (5,443) soldiers have either transferred or abandoned their farms, leaving 4,430 (4,409) in occupation of 6,384,864 (6,389,291) acres, of which 5,105,254 (5,104,583) acres were Crown lands (including 2,876,875 (2,876,875) acres in the Western Division taken up under the Western Lands Act), 1,212,116 (1,214,786) acres acquired lands, and 67,494 (69,922) acres within Irrigation Areas. These totals exclude 703 (703) discharged soldiers who purchased privately-owned land with their own capital and were granted advances for the purchase of stock and plant or for effecting improvements.

3. **Victoria.**—At 30th June, 1938, the area acquired or set apart for soldier settlement in respect of the 1914–18 War was 2,482,286 acres consisting of 1,763,241 acres of private land purchased at a cost of £13,361,266, 133,128 acres costing £1,246,722 taken over from Closer Settlement, and 585,917 acres of Crown lands valued at £447,622. Subsequently 512,757 acres valued at £4,125,822 were transferred to Closer Settlement. Up to 30th June, 1938, the number of settlers to whom farms, etc., had been allotted was 12,126, and the number of farms, etc., allotted was 9,784 (including 955 farms originally purchased for closer settlement purposes) containing 2,365,518 acres. In addition, 802 share farmers and holders of leasing agreements and private land had received assistance. The number of farms, etc., occupied at 30th June, 1938, was 8,426 (including 1,001 originally purchased for closer settlement) containing 1,734,379 acres. Later particulars cannot be given, as separate details are not available.

4. **Queensland.**—At 30th June, 1929, the area acquired or set apart for soldier settlement (1914–18 War) was 577,633 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms occupied was 1,148, containing 440,992 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

As special records are not now kept respecting the areas held by discharged soldier settlers later information cannot be given.

5. **South Australia.**—At 30th June, 1945 and 1946, the area of land acquired or set apart for soldier settlement (1914–18 War) was 1,336,612 acres, of which 1,202,653 acres comprised private land purchased at a cost of £3,863,572. These figures exclude mortgages discharged, £494,770 on 360,403 acres representing 300 farms, etc., and 314 settlers. The number of soldiers to whom assistance had been granted under the Discharged Soldiers' Settlement Acts up to 30th June, 1946, was 4,165, and the area of farms, etc. (including mortgages discharged), on which assistance had been granted was 2,746,744 acres. At 30th June, 1946 (1945), farms, etc., occupied numbered 1,431 (1,531) containing 940,882 (1,051,164) acres.

6. **Western Australia.**—At 30th June, 1945 and 1946, the area of private land acquired for soldier settlement (1914–18 War) was 355,290 acres purchased at a cost of £617,524. Up to 30th June, 1946 (figures to 30th June, 1945 in parenthesis), assistance had been given to 5,213 (5,213) returned soldiers, and the Rural and Industries Bank held 1,779 (2,667) properties as security for advances amounting to £1,416,039 (£3,046,002), including capitalization of interest. The number of farms, etc., occupied by returned soldiers was 1,145 (1,145).

Separate particulars are no longer available of the area of land set apart for soldier settlement, but at 30th June, 1944, the figure was 13,942,533 acres. In addition, 345,110 acres of private land had been acquired at that date—a total of 14,287,643 acres in all.

7. **Tasmania.**—At 30th June, 1946 (figures at 30th June, 1945, in parenthesis) the area acquired or set apart for soldier settlement (1914–18 War) was 343,557 (343,557) acres, of which 274,193 (274,193) acres comprised private land purchased at a cost of £2,096,063 (£2,087,097). Up to 30th June, 1946, (figures to 30th June, 1945, in parenthesis) the number of settlers to whom farms, etc., had been allotted was 2,380 (2,380) and the number of farms, etc., allotted was 2,204 (2,204) containing 343,557 (343,557) acres. The number of farms, etc., occupied at 30th June, 1946, was 975 containing 185,887 acres compared with 1,039 containing 198,916 acres at 30th June, 1945.

8. **Summary.**—As with closer settlement, it is not possible to give up-to-date figures of soldier settlement (1914–18 War) for Australia as a whole. The following figures are aggregations of State totals as at the latest dates available :—Total areas acquired and set aside, 28,900,000 acres, including 5,500,000 acres of private land acquired at a cost of £29,800,000.

9. **Losses on Soldier Settlements.**—(i) *General.* At the Premiers' Conference in Melbourne in 1917, it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, and that the Commonwealth should raise the necessary loans for the States for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Loans were to be advanced to the settlers by the States at reasonable rates of interest not exceeding 3½ per cent. in the first year, increasing by ½ per cent. each subsequent year to the full rate of interest at which the money had been raised, plus working expenses, the difference between these rates and the cost of the money to the Government to be borne equally by the Commonwealth Government and the State Government. This provision respecting interest loss was not ultimately carried out as passed, the Commonwealth Government assuming responsibility for more than one-half of the interest loss, namely, a rebate of interest equal to 2½ per cent. per annum during a period of five years from the date of payment to the State of each instalment of loan money.

(ii) *Report by Mr. Justice Pike.* In addition to this expected loss of interest other losses occurred in connexion with soldier settlement, and in 1927 Mr. Justice Pike, of the Land Valuation Court of New South Wales, was commissioned to report, not only on the losses, but on the principles on which financial responsibility should be divided. His report in 1929, to which reference should be made for fuller information, found that in all the negotiations concerning soldier settlement on the land the States insisted on undivided control, and that financial responsibility went along with control except so far as the Commonwealth definitely promised to give assistance. The undertaking of the Commonwealth to share equally with the States the cost of lower interest rates to soldier settlers was made the basis of a practical compromise, and the report recommended that the total loss should be shared equally between the two parties.

The gross losses were assessed at £23,525,522 distributed amongst the States as follows :—New South Wales, £7,003,950 ; Victoria, £7,721,891 ; Queensland, £1,853,315 ; South Australia, £3,565,829 ; Western Australia, £2,059,368 ; and Tasmania, £1,321,169. Other concessions granted by the Commonwealth Government increased its proportion of these gross losses (£11,762,760) to £12,333,000.

The total amount advanced by the Commonwealth to the States was £35,000,000. For further information on this subject *see* Official Year Book, No. 28, pp. 131–2, and earlier issues.

§ 9. Settlement of Returned Service Personnel : 1939-45 War.

1. **War Service Land Settlement Scheme.**—(i) *General.* At a conference of Commonwealth and State Ministers held at Canberra on 22nd August, 1945, certain proposals were agreed to with a view to the settlement, on land in the States, of discharged members of the Forces and other eligible persons. The War Service Land Settlement Agreements Act 1945, to authorize the execution by or on behalf of the Commonwealth of Agreements between the Commonwealth and the States in relation to War Service Land Settlement, was assented to on 11th October, 1945. In each State the proposals agreed to at Canberra on 22nd August, 1945, were ratified by State legislation and Agreements between the Commonwealth and the States were signed in November, 1945.

The execution of Agreements between the Commonwealth and the States of New South Wales, Victoria and Queensland is substantially in accordance with the form contained in the First Schedule of the Act, while the Agreements between the Commone wealth and the States of South Australia, Western Australia and Tasmania ar- substantially in accordance with the form contained in the Second Schedule of the Act.

FIRST SCHEDULE.

Under the conditions of the First Schedule, it was agreed that the States (New South Wales, Victoria and Queensland) should provide capital moneys required for the purpose of acquiring, developing and improving land for settlement and for advances to settlers, bear the cost of State administration, and make a capital contribution in respect of each holding, of an amount equal to one-half of the excess of the total cost involved in acquiring, developing and improving the holding over the sum of valuations of the land and improvements. The State bears one-half of the cost involved in the remission of rent and interest during the assistance period (the first year after allotment of the holding, and also one-half of any losses (to be assessed on a basis to be agreed upon by the Commonwealth and the State) incurred by the State on advances made to settlers for the purpose of providing working capital and paying for and affecting improvements and acquiring stock, plant and equipment. The Commonwealth makes a capital contribution of half of any excess of the cost over valuation of any holding and bears one-half of any losses arising from advances approved for working capital, and paying for and effecting improvements and acquiring stock, plant and equipment. The Commonwealth also bears one-half of the cost involved in the remission of rent and interest during the assistance period. The Commonwealth bears the cost of payment to each settler of a living allowance during the first year after allotment.

SECOND SCHEDULE.

In the Agreement with the States of South Australia, Western Australia and Tasmania, under the conditions of the Second Schedule, the State agreed to administer the Scheme on behalf of the Commonwealth. The Commonwealth accepts responsibility for policy decisions and exercises general supervision over the Scheme. The State bears the cost of State Administration of the Scheme and makes a capital contribution in respect of each holding equal to two-fifths of the excess of the total cost involved in acquiring, developing and improving the holding over the sum of valuations of land and improvements. The Commonwealth provides capital moneys required for the purpose of acquiring, developing and improving land for settlement, and for the making of advances to settlers, under and in accordance with the terms of the agreement, and makes a capital contribution in respect of each holding of an amount equal to three-fifths of the excess of the total cost involved in acquiring, developing and improving the holding over the sum of valuations of the land and improvements. The Commonwealth also bears any losses arising out of advances made to settlers for working capital, and paying for and effecting improvements and acquiring stock, plant and equipment, and all the cost involved in the remission of rent and interest and the payment of living allowances during the assistance period.

(ii) *Cost of Land, Valuations, Tenure.* An important provision of the Scheme is that land shall not be acquired by a State at a cost in excess of the values ruling as at the 10th February, 1942, when the Commonwealth Government's general price stabilization scheme was introduced.

Valuations are made by officers appointed by the Commonwealth and State for the purpose. In making the valuations the officers have regard to the need for the proceeds of the holding (based on conservative estimates over a long-term period of prices and yields for products) being sufficient to provide a reasonable living for the settler after meeting such financial commitments as would be incurred by a settler possessing no capital. Any excess of costs over the total valuation of a holding is written off.

A condition of the Agreements in the Second Schedule under which the States of South Australia, Western Australia and Tasmania operate, is that holdings must be allotted on perpetual leasehold tenure ; the general terms and conditions of the lease to be approved by the Commonwealth. Two of the three States operating under the First Schedule (New South Wales and Queensland) have voluntarily adopted the perpetual leasehold type of tenure.

(iii) *Principles of Operation.* It was agreed that under the Scheme, land settlement should be carried out in accordance with the following principles :—

(*a*) Settlement shall be undertaken only where economic prospects for the production concerned are reasonably sound ; and the number of eligible persons to be settled shall be determined primarily by opportunities for settlement and not by the number of applicants ;

(*b*) Applicants shall not be selected as settlers unless a competent authority is satisfied as to their eligibility, suitability and qualifications for settlement under the Scheme and their experience of farm work ;

(*c*) Holdings shall be sufficient in size to enable settlers to operate efficiently and to earn a reasonable labour income ;

(*d*) An eligible person deemed suitable for settlement shall not be precluded from settlement by reason only of lack of capital, but a settler will be expected to invest in the holdings such proportion of his own financial and other resources as is considered reasonable in the circumstances by the appropriate State Authority ;

(*e*) Adequate guidance and technical advice shall be made available to settlers through agricultural extension services.

(iv) *Method of Operation.* After a State has selected such land as it considers suitable for settlement, it submits to the Commonwealth detailed information regarding the property ; its location, climate, type of soils, water supply, production (past and proposed) and plans of development, improvement and subdivision of the land. Where Commonwealth approval has finally been given to a proposal, the State proceeds with the sub-division of the property, selection of settlers, and improvement of the holdings to a stage where they can be brought into production by the settler within a reasonable time, having regard to the type of production proposed.

A settler may be granted a living allowance, at a rate and under conditions fixed by the Commonwealth, during a period of one year after the allotment of a holding to him. This period is referred to as " the assistance period " and it may, under special circumstances, be extended. During this period the settler is not required to pay any rent or interest in respect of the holding, or make any payments on account of principal or interest in respect of advances, other than advances for working capital.

Each soldier settler is granted a residential course of eight weeks duration, at a Government Training Centre, in the " Principles of Farm Management ". This course provides an opportunity for those already possessed of sufficient practical knowledge and experience gained on the land to gain a knowledge on aspects of farming not normally acquired in farming occupations.

(v) *Summary of Operations to 30th June, 1947.* Up to 30th June, 1947, the States had submitted to the Commonwealth settlement proposals involving 5,378,628 acres, and of that total 3,842,883 acres had been approved as suitable for soldier settlement.

The tables hereunder show the position up to 30th June, 1947.

WAR SERVICE LAND SETTLEMENT (1939–45 WAR): SUMMARY TO 30th JUNE, 1947.

State.	Land Submitted by States.		Land Approved by Commonwealth.				Land Purchased by States.	
			As Suitable for Soldier Settlement. (a)		For Acquisition.			
	Sub-missions.	Area.	Pro-perties.	Area.	Pro-perties.	Area.	Pro-perties.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
New South Wales—								
Western Division	72	2,518,394	62	1,810,050	62	1,810,050	62	1,810,050
Group Promotion	50	266,995	40	189,863	40	189,863	14	58,471
Other	52	838,551	45	672,423	45	672,423	14	347,106
Total New South Wales ..	174	3,623,940	147	2,672,336	147	2,672,336	90	2,215,627
Victoria	36	346,203	32	289,899	32	289,899	32	223,208
Queensland ..	19	102,319	19	102,319	19	102,319	6	20,704
South Australia ..	85	388,298	57	185,092	52	178,655	48	158,764
Western Australia..	264	751,087	138	445,972	121	402,894	121	345,204
Tasmania ..	12	166,781	10	147,265	9	145,293	3	41,932
Total ..	590	5,378,628	403	3,842,883	380	3,791,396	300	3,005,439

(a) Includes land approved for acquisition under next heading.

State.	Land Approved by Commonwealth for Subdivision.			Single Holdings Approved by Commonwealth.		Land Allotted to Settlers.		Land Deferred for Consideration, Under Consideration, Rejected or Withdrawn.
	Pro-perties.	Area.	Hold-ings.	Area.	Hold-ings.	Area.	Hold-ings.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
New South Wales—								
Western Division	..	..	..	1,810,050	62	1,222,343	48	708,344
Group Promotion	39	184,496	148	..	..	9,725	20	77,132
Other	20	190,674	193	..	..	92,209	84	166,128
Total New South Wales ..	59	375,170	341	1,810,050	62	1,324,277	152	951,604
Victoria	15	74,621	208	1,411	2	55,960	137	56,304
Queensland ..	9	28,096	31	700	1	15,655	21	..
South Australia ..	4	8,542	12	49	2	49	2	203,206
Western Australia..	11	60,101	32	127,734	74	68,111	50	305,115
Tasmania ..	1	1,141	2	..	..	..	..	19,516
Total ..	99	547,671	626	1,939,944	141	1,464,052	362	1,535,745

NOTE.—At 31st December, 1947, land submitted totalled 6,473,539 acres, land approved for acquisition, 4,830,323 acres, land purchased, 3,706,458 acres, and land allotted, 2,279,657 acres.

The area approved in New South Wales as suitable for settlement to 30th June, 1947, was 2,672,336 acres. Sub-division of 59 properties, together with 62 single grazing leases, has resulted in 403 holdings, with an area of 2,185,220 acres, being made available to that date for ex-servicemen. The number of holdings allotted to settlers was 152, involving 1,324,277 acres. In Victoria, apart from the irrigation areas, Soldier Settlement is being concentrated mainly in the Western District, where there is an assured rainfall and where wool and fat lamb production and dairying will be the main forms of activity. Already 76,032 acres have been subdivided into 210 holdings and 137 holdings involving 55,960 acres have been allotted to settlers. In Queensland 102,319 acres have been submitted to the Commonwealth for soldier settlement and approved, and to 30th June, 1947, an area of 28,796 acres was subdivided into 32 holdings. There have been 21 holdings in 15,655 acres allotted to applicants and the lands will be used for dairy farming, pig raising, cereal growing and for the production of fat lambs and wool. The area submitted for soldier settlement by South Australia is 388,298 acres and 185,092 acres have been approved by the Commonwealth. Apart from the irrigation area at Loxton on the River Murray, proposals for settlement are mainly confined to the south eastern portion of the State and the Eyre Peninsula. To the 30th June, 1947, an area of 8,591 acres had been subdivided into 14 holdings, and only two small existing holdings had been allotted to settlers. In this State extensive developmental programmes have been undertaken and it is anticipated that many highly improved properties will be made available for application during the coming year. Western Australia has submitted 264 proposals for soldier settlement involving 751,087 acres, and 445,972 acres have been approved. There have been 60,101 acres sub-divided into 32 holdings and 74 existing single farms with a total area of 127,734 acres have been approved as suitable. There have been 50 holdings with an area of 68,111 acres allotted to ex-soldier applicants, 25 being dairy farms and 25 wheat and sheep properties. In the south-western portion of the State where heavy rainfall is assured each year, the holdings will be used for dairying and pig raising and developmental work is in hand for the establishment of a considerable number of additional dairy farms in that region. Where the conditions are favorable fat lambs will be raised. Inland, where the annual rainfall is not so heavy, wheat growing and sheep breeding for wool will be the basis of production. There have been 147,265 acres approved for soldier settlement in Tasmania and on King and Flinders Islands. Considerable developmental work is in progress and holdings will soon be available for allotment. Settlers will be engaged chiefly in dairying and sheep breeding for wool and fat lambs.

(vi) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1947 :—

WAR SERVICE LAND SETTLEMENT (1939-45 WAR): EXPENDITURE TO 30th JUNE, 1947.

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
For acquisition of land	..	..	..	888,477	829,495	251,750	1,969,722
For development and improvement of land	..	..	..	268,975	204,439	69,292	542,706
For payment of living allowances to settlers	10,968	..	1,000	1,099	2,000	..	15,067
To provide credit facilities to settlers	..	..	..	11,564	30,000	..	41,564
Total ..	10,968	..	1,000	1,170,115	1,065,934	321,042	2,569,059

NOTE.—Expenditure to 31st December, 1947, in the same order as above, was: £2,362,185, £796,491, £42,037, £45,034, total, £3,245,747.

(vii) *Proposed Developments.* Surveys have shown that some expansion of the sheep and wool, dairying, and citrus and dried fruit industries, in particular, can be undertaken with a reasonable degree of safety and it is mainly on the basis of those industries that settlement under the War Service Land Settlement Scheme is taking place.

Additional areas of land will be brought under irrigation. These lands are situated principally in the River Murray Valley in the States of New South Wales, Victoria and South Australia, but an area of 22,000 acres in the Maffra district in Gippsland, Victoria, will be irrigated from the Thompson River. In that State the areas under irrigation will be used for dairying and for growing citrus fruits, and fruits and grapes to be canned or dried. In New South Wales the irrigated lands will be used for the production of fat lambs, wool, dairy produce and rice. In South Australia, dried and citrus fruits will be produced. The area of land involved in irrigation proposals in each State to the 30th June, 1947, was—New South Wales, 122,060 acres ; Victoria, 104,400 acres ; South Australia, 11,830 acres ; total, 238,290 acres.

2. **Loans and Allowances (Agricultural Occupations) Scheme.**—(i) *General.* In June, 1945, the Commonwealth Parliament passed the Re-establishment and Employment Act which provides measures for the re-establishment of ex-servicemen in civil life and for facilitating their re-employment. The Act makes provision for the granting of a loan to an eligible ex-serviceman who needs financial assistance to enable him to engage in or resume any occupation, business or practice on his own account, as an active member of a partnership, as a share farmer or as a contract worker. The occupations include agricultural pursuits which are defined by the Act as occupations by way of farming, horticulture, viticulture, apiculture, dairy farming, poultry farming and pastoral or grazing operations. The Commonwealth prescribed the Director of War Service Land Settlement as the Authority to administer the Act insofar as it applies to agricultural occupations. This is set out in Divisions 3 and 4 of Part VI. In pursuance of the powers granted under the Act, and with the approval of the Treasurer, the Director of War Service Land Settlement concluded agreements with State Authorities for the detailed administration by them of loans and allowances to applicants engaged in agricultural occupations. The Re-establishment and Employment Act 1945 also makes provision for the granting of a financial allowance to an eligible ex-serviceman to enable him to establish or re-establish himself satisfactorily in civil life in an occupation, business or practice on his own account, as an active member of a partnership, as a share farmer, or as a contract worker.

(ii) *Loans (Agricultural Occupations).* The terms and conditions on which loans are made have been laid down by the Commonwealth. Loans are made from finance provided by the Commonwealth which also pays the cost of administration by the State Authorities. An applicant is required to satisfy the lending Authority that he has the ability and qualifications to engage, with a reasonable prospect for success, in the form of primary production in respect of which the loan is sought. He must also satisfy the authority that his engaging in the occupation is a suitable means of establishing or re-establishing himself in civil life and that he is likely to be able to repay the loan within a reasonable period. Loans of up to £1,000 can be made to eligible ex-servicemen for the purchase of land, effecting improvements on land, acquisition of tools of trade, livestock, plant or equipment, establishment of a co-operative business with other persons, reduction or discharge of a mortgage, bill of sale, etc. Repayment of loans by periodical instalments of principal and interest is required and security for the loan is taken by means of a mortgage over the land, a charge over stock, plant or equipment, a crop and/or wool lien, an assignment of income or a charge over any other assets. The total amount which may be loaned to any one eligible person shall not exceed £1,000, or 90 per cent. of the lending authorities' valuation of the security offered whichever is the less. Where the security is already encumbered, the total amount of the loan together with the amount of any such existing encumbrance or charge may not exceed 90 per cent. of the lending authority's valuation of such security. Repayment of the loan may be spread over a period of up to 30 years, but the actual period in each case shall be determined by the lending authority having regard to the anticipated useful life of the assets over which security is taken. The rate of interest payable on loans is—

(1) Where the total amount advanced for all purposes exceeds £50 but does not exceed £250—

For the first £50	Nil
For the amount over £50	2 per cent. per annum.

(2) Where the total amount advanced for all purposes exceeds £250 but does not exceed £1,000—

For the first £50	Nil.
For the next £200	2 per cent. per annum.
For the remainder	3¾ per cent. per annum.

Ex-servicemen are taking advantage of this means of re-establishing themselves and to the 30th June, 1947, the number of applications approved by State authorities on behalf of the Commonwealth was 6,211 for an amount of £4,394,480. The amount actually advanced to applicants to 30th June, 1947, was £2,515,881. The following table shows particulars for each State to 30th June, 1947 :—

LOANS (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1947.

State.	Applications.			Loans Approved.			Advanced by Commonwealth Treasury to States.	Advanced by States to Applicants.
	Received.	Approved.	Refused, Withdrawn or Not Yet Approved.	Gross Amount.	Net Approvals.(a)			
					Applications.	Amount.		
				£		£	£	£
New South Wales	3,253	2,647	606	1,866,087	2,395	1,681,025	1,100,000	1,073,956
Victoria ..	2,234	1,208	1,026	786,657	1,147	752,672	460,000	401,111
Queensland ..	697	475	222	265,774	404	222,632	135,000	122,429
South Australia ..	860	464	405	347,618	440	334,946	250,000	208,184
Western Australia	1,803	1,209	594	997,675	1,158	956,763	670,000	629,342
Tasmania ..	467	206	261	128,669	196	124,569	100,000	78,859
Northern Territory	8	2	6	2,000	2	2,000	2,000	2,000
Total ..	9,331	6,211	3,120	4,394,480	5,742	4,074,607	2,717,000	2,515,881

(a) After deduction of loans declined after approval—£319,873.

NOTE.—To 31st December, 1947, applications received totalled 11,608, and approved, 7,963 ; net amount approved, £5,213,580 ; amount advanced to applicants, £3,787,999.

(iii) *Allowances (Agricultural Occupations).* These allowances are payable only in respect of the period during which the income derived from the occupation by the ex-servicemen concerned is, in the opinion of the prescribed authority, inadequate. The rate per week of the allowance is determined by the prescribed authority, having regard to all the circumstances of the case, including the income of the person concerned. The maximum period for which the allowance is payable is twelve months from the date of entering into working occupation of the property, or from the date of resuming working occupation after war service if the property was occupied by the applicant prior to engagement on war service.

To the 30th June, 1947, there had been 5,977 applications approved and the amount paid was £706,640. The following table gives State details to 30th June, 1947 :—

ALLOWANCES (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1947.

State.	Applications.			Advanced by Common-wealth Treasury to Bank.	Allowances Paid
	Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.		
				£	£
New South Wales ..	2,099	1,801	298	225,000	211,675
Victoria	1,540	1,082	458	110,000	100,107
Queensland.. ..	1,473	1,099	374	143,500	142,302
South Australia ..	842	512	330	85,000	75,152
Western Australia ..	1,632	1,363	269	170,000	160,113
Tasmania	185	120	65	18,000	17,291
Total ..	7,771	5,977	1,794	751,500	706,640

NOTE.—To 31st December, 1947, 9,858 allowances had been received, 7,912 approved and the allowances paid, £1,075,969.

3. **War Service Land Settlement Division—Total Expenditure.**—The following table shows details, by States, of the total expenditure of the War Service Land Settlement Division for the years 1945–46 and 1946–47 and the aggregate to 30th June, 1947. The aggregate, £6,392,236, includes—War service land settlement, £2,569,059 ; agricultural loans, £2,717,000 ; agricultural allowances, £751,500 ; administrative expenses, £68,960 ; rural training, £285,717. Details of the larger items are given in the paragraphs concerning them.

WAR SERVICE LAND SETTLEMENT DIVISION : EXPENDITURE.

Period.	New South Wales.	Victoria.	Queens-land.	South Australia.	Western Australia.	Tas-mania.	Northern Territory.	Total.
	£	£	£	£	£	£	£	£
1945–46 ..	120,500	153,804	60,000	263,299	610,042	331,769	..	1,539,414
1946–47 ..	1,289,426	536,231	261,780	1,285,495	1,337,384	140,506	2,000	4,852,822
Total to 30th June, 1947	1,409,926	690,035	321,780	1,548,794	1,947,426	472,275	2,000	6,392,236

NOTE.—Totals to 31st December, 1947, were, New South Wales, £2,133,803 ; Victoria, £1,213,109 ; Queensland, £531,955 ; South Australia, £1,959,115 ; Western Australia, £2,738,844 ; Tasmania, £519,189 ; Grand total, £9,098,015.

§ 10. Tenure of Land by Aliens.

Information regarding the terms and conditions under which land can be held by aliens is contained in earlier issues of the Official Year Book (see No. 18, pp. 190–1). All tenure of land by aliens in April, 1948, was subject to the National Security (Economic Organization) Regulations, 1942.

§ 11. Advances to Settlers.

1. **General.**—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory appears in preceding issues of the Official Year Book (see No. 22, pp. 179–186).

In this section are summarized the loans and advances made by the various Government lending agencies in the States, including the transactions in lands acquired under closer and soldier settlement schemes. The balances owing on former Crown lands sold on the conditional purchase, etc., system, however, are not included.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of reappraisements of land values and the writing down of debts.

2. **New South Wales.**—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1946 :—

ADVANCES TO SETTLERS : NEW SOUTH WALES.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Accounts.	£
	£	£	£		
Department of Lands—					
Closer Land Settlement	172	..	15,113,154	7,885	(a)6,736,933
Soldier Settlers	..	..	(b)3,196,005	1,405	608,919
Wire Netting	..	..	1,494,653	2,248	249,346
Prickly Pear	3,779	4,868	159,213	295	8,492
Rural Bank—					
Rural Bank Department	962,073	1,800,851	40,479,964	12,341	13,295,960
Government Agency Department—					
Rural Industries	187,702	156,783	7,424,042	2,369	1,077,797
Unemployment Relief and Dairy Promotion	19,631	32,001	1,434,893	2,741	429,879
Rural Reconstruction (c)	756,143	868,160	8,463,929	3,764	4,237,098
Shallow Boring	9,628	12,529	904,393	743	211,216
Irrigation Areas..	29,945	33,006	(d)	(d)	1,363,833
Government Guarantee Agency ..	40,892	32,425	125,193	22	13,822
Closer Settlement Agency ..	..	..	166,826	121	162,471
Total	2,009,965	2,940,623	78,962,265 (e)	(e) 33,934	28,395,766

(a) Excludes £794,740 in 1944–45 and £2,592,820 in 1945–46 capitalized on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,924,309 has been expended on developmental works on soldiers' settlements. (c) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £3,036,800. (d) Not available. (e) Incomplete.

3. **Victoria.**—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1946 :—

ADVANCES TO SETTLERS : VICTORIA.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Persons.	£
	£	£	£		
State Savings Bank, Credit Foncier—					
Civilians	28,200	45,492	11,210,463	2,718	2,558,623
Discharged Soldiers	822	161	846,947	226	173,874
Treasurer—					
Cool Stores, Canneries, etc. ..	90,000	66,000	842,283	(a) 11	242,732
Department of Lands and Survey—					
Closer Settlement Settlers and Soldier Settlers	..	..	b46,904,855	7,383	8,925,063
Cultivators of Land	76,155	90,130	2,406,202	1,650	231,236
Wire Netting	79	5,886	575,537	1,450	111,094
Total	195,256	207,669	62,786,287	13,438	12,242,622

(a) Companies and Co-operative Societies. (b) Represents consolidated debts of settlers (Section 30, Act 4091).

4. **Queensland.**—The following table gives particulars of advances to 30th June, 1946. The figures exclude transactions in land.

ADVANCES TO SETTLERS : QUEENSLAND.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Persons.	£
	£	£	£		
Co-ordination of Rural Advances and Agricultural Bank Acts	313.852	446,030	9,732,194	3,285	1,623,026
Discharged Soldiers' Settlement (*a*) ..	3,623	1,627	2,468,436	832	236,026
Water Facilities	..	..	58,079	147	11,061
Wire Netting, etc.	..	114	1,019,403	2,037	237,534
Seed Wheat and Barley	876	1,517	(*b*) 126,653	(*c*)	13,344
Drought Relief	..	..	294,458	(*c*)	64,500
Income (Unemployment Relief and State Development) Tax Acts (*d*) ..	6,450	4,739	1,188,710	2,443	367,555
Irrigation	..	..	54,914	66	17,215
Farmers' Assistance (Debt Adjustment Acts)	50,012	42,480	939,514	396	598,237
Total	374,813	496,507	15,882,361	(*e*)10,783	3,168,498

(*a*) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (*b*) Includes accrued interest. (*c*) Not available. (*d*) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (*e*) Incomplete.

5. **South Australia.**—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1946 :—

ADVANCES TO SETTLERS : SOUTH AUSTRALIA.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Persons.	£
	£	£	£		
Department of Lands—					
Advances to soldier settlers ..	27,047	28,986	4,414,157	831	2,202,061
Advances to blockholders ..	..	..	41,451	..	..
Advances for sheds and tanks ..	..	..	75,693	106	19,840
Advances under Closer Settlement Acts	28,352	26,236	2,536,330	1,114	1,265,015
Advances under Agricultural Graduates Settlement Act	..	..	62,067	30	46,228
Primary Producers Assistance Department—					
Advances in drought-affected areas	..	..	2,146.768	288	100,119
Advances under Farmers Relief Acts	13,843	31,335	4,408,021	386	108,392
Irrigation Branch—					
Advances to civilians	269	2,204	286,893	310	78,321
Advances to soldier settlers ..	4,803	2,070	1,035,506	600	765,053
State Bank of South Australia (Credit Foncier Department)	21,599	67,094	5,553,636	1,179	664,326
Advances to Primary Producers ..	16,842	44,065	1,117,635	353	754,817
Advances to settlers for improvements	2,891	3,287	1,100,287	892	226,765
Advances under Vermin and Fencing Acts	427	544	1,376,308	2,306	221,116
Advances under Loans to Producers Act	12,511	23,119	357,437	132	198,785
Total	128,584	228,940	24,512,189	8,527	6,650,838

6. **Western Australia.**—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1946 :—

ADVANCES TO SETTLERS : WESTERN AUSTRALIA.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Accounts.	£
	£	£	£		
Development loans	15,810	15,042	10,468,678	3,370	2,108,416
Soldier settlement loans	2,247	3,816	*a* 6,110,626	1,779	1,607,406
Cropping advances	19,036	33,574	*b* 14,419,801	482	48,793
Group Settlement Advances ..	806	8,155	6,302,398	983	480,494
Repurchased Estates—					
Under Agricultural Lands Purchase Act 1909	..	..	575,368	342	16,792
Soldier Settlement	..	..	605,076	810	33,682
Wire and Wire-netting Advances ..	..	..	513,648	1,905	295,395
Total	37,899	60,587	38,995,595	9,671	4,590,978

(*a*) Includes capitalization of interest to principal. (*b*) Includes all advances made under Drought Relief Assistance and losses incurred.

The establishment of the Rural Industries Bank of Western Australia in October, 1945, resulted in a transfer of many of the developmental accounts to the new bank. At 30th June, 1945, the number of accounts and amounts outstanding were 13,588 and £9,372,992 respectively.

7. **Tasmania.**—The following table gives particulars respecting advances under State Authorities to 30th June, 1946. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99 year terms having an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS : TASMANIA.

Advances.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Persons.	£
	£	£	£		
Agricultural Bank—					
State Advances Act and Rural Credits	135,682	147,991	1,723,719	528	(*a*) 184,874
Orchardists' Relief, 1926	..	..	46,832	8	536
Unemployed (Assistance to Primary Producers) Relief Act 1930–1931	..	..	114,302	170	5,780
Bush Fire Relief Act 1934 ..	..	..	14,855	19	422
Flood Sufferers' Relief Act 1929 ..	..	..	35,523	14	2,286
Crop Losses, 1934–35	..	..	10,086	23	631
Assistance to Fruitgrowers Act 1941	..	..	34,556	312	14,104
Flood Sufferers' Relief Act, 1942 ..	..	..	3,764	23	1,749
Flood Sufferers' Relief Act, 1944 ..	634	1,268	1,902	6	1,838
Minister for Agriculture—					
Soldier Settlers—					
Advances	3,217	4,091	859,639	170	(*b*) 21,013
Purchase of Estates, etc. (*c*) ..	..	..	2,504,411	(*d*) 975	847,397
Closer Settlers—					
Advances	..	365	92,250	41	8,074
Purchase of Estates, etc. (*c*) ..	..	..	510,467	(*d*) 190	247,696
Total	139,533	153,715	5,952,306	2,479	1,336,400

(*a*) Excludes £29,876 forfeited properties, and £138 written off under revaluation legislation. (*b*) Excludes £200,593 advances capitalized, £79,114 advances written off to bad debts, and £39,293 written off to revaluation. (*c*) Not regarded as outstanding advances by the Department. (*d*) Number of leaseholders including those to whom advances have been made.

8. **Northern Territory.**—During the financial years 1944–45 and 1945–46 no advances were made. The total amount advanced to 30th June, 1946, was approximately £25,549 (£25,549) (1945 figures in parenthesis). At 30th June, 1946, the balance outstanding from 16 (20) settlers, including interest, was £1,890 (£2,556).

9. **Summary of Advances.**—The following table gives a summary for each State and the Northern Territory to the 30th June, 1946. The particulars so far as they are available represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations.

ADVANCES TO SETTLERS : AUSTRALIA.

State.	Advances made during—		Total Advances at 30th June, 1946.	Amount outstanding at 30th June, 1946.	
	1944–45.	1945–46.		Number of Persons.	£
	£	£	£		
New South Wales ..	2,009,965	2,940,623	78,962,265	(a) 33,934	28,395,766
Victoria	195,256	207,669	62,786,287	13,438	12,242,622
Queensland	374,813	496,507	15,882,361	(b) 10,783	3,168,498
South Australia ..	128,584	228,940	24,512,189	8,527	6,650,838
Western Australia ..	37,899	60,587	38,995,595	(a) 9,671	4,590,978
Tasmania	139,533	153,715	5,952,306	2,479	1,336,400
Northern Territory ..	..	..	25,549	16	1,890
Total	2,886,050	4,088,041	227,116,552	(b) 78,848	56,386,992

(a) Number of accounts. (b) Incomplete.

§ 12. Alienation and Occupation of Crown Lands.

1. **General.**—The figures given in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out in summarized form the position in regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1946 in all cases. Particulars for each year from 1935 to 1945 appear in *Production Bulletin* No. 40, Part II., page 7. The area unoccupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—The total area of New South Wales is 198,037,100 acres of which 26.1 per cent. had been alienated at 30th June, 1946, 8.0 per cent. was in process of alienation, 58.0 per cent. was held under leases and licences and the remaining 7.9 per cent. was unoccupied or held by the Crown.

The following table gives particulars as at 30th June, 1946 :—

ALIENATION AND OCCUPATION OF CROWN LANDS : NEW SOUTH WALES, 30th JUNE, 1946.

Particulars.	Acres.	Particulars.	Acres.
1. *Alienated.*		3. *Held under Leases and Licences.*	
Granted and sold prior to 1862 ..	7,146,579	Homestead selections and grants ..	1,671,584
Sold by auction and other sales, 1862 to date	15,184,763	Alienable leases, long-term and perpetual	27,122,988
Conditionally sold, 1862 to date	31,686,702	Other long-term leases	74,724,076
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	Short-term leases and temporary tenures	9,058,653
Granted for public and religious purposes	265,708	Forest leases	2,113,734
		Mining and auriferous leases (*a*) ..	195,714
	54,455,950		
Less lands resumed or reverted to Crown	2,818,435		
Total	51,637,515	Total	114,886,749
2. *In Process of Alienation.*			
Conditional purchases	13,315,504		
Closer settlement purchases ..	2,097,161		
Soldiers' group purchases ..	235,763		
Other forms of sale	158,559		
Total	15,806,987	4. *Unoccupied* (*b*)—Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied, (Approximate)	15,705,849

Total area of State—198,037,100 acres.

(*a*) At 31st December, 1945. (*b*) Of this area only 3,234,667 acres are available for selection, the balance being reservations for roads, various public purposes, water frontages, and river and lake surfaces.

3. **Victoria.**—The total area of Victoria is 56,245,800 acres, of which 52.2 per cent. had been alienated up to the end of 1946 : 5.6 per cent. was in process of alienation under deferred payments and closer settlement schemes ; 18.8 per cent. was occupied under leases and licences ; and 23.4 per cent. was unoccupied or held by the Crown.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : VICTORIA, 31st DECEMBER, 1946.

Particulars.	Acres.	Particulars.	Acres.
1 *Alienated*	29,351,245	3. *Leases and Licences held*—	
2. *In Process of Alienation*—		Under Lands Department—	
Exclusive of Mallee and Closer Settlement Lands	462,464	Perpetual Leases ..	83,994
Mallee Lands (exclusive of Closer Settlement Lands) ..	2,046,057	Agricultural College Leases	66,974
Closer Settlement Lands ..	649,997	Other Leases and Licences	20,314
Village Settlement	38	Temporary (Yearly) Grazing Licences	9,778,012
		Under Mines Department ..	648,046
		Total .. .	10,597,340
Total	3,158,556	4. *Occupied by the Crown or Unoccupied*	13,138,659

Total area of State—56,245,800 acres.

4. **Queensland.**—The total area of this State is 429,120,000 acres, of which, on 31st December, 1946, 5.2 per cent. was alienated; 1.3 per cent. was in process of alienation; and 82.7 per cent. was occupied under leases and licences. The remainder, 10.8 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table:—

ALIENATION AND OCCUPATION OF CROWN LANDS: QUEENSLAND, 31st DECEMBER, 1946.

Particulars.	Acres.	Particulars.	Acres.
1. *Alienated—*		3. *Occupied under Leases and Licences—*	
By Purchase	22,325,842	Pastoral Leases	243,801,960
Without Payment	92,116	Occupation Licences	17,986,440
		Grazing Selections and Settlement Farm Leases	83,248,538
		Leases—Special Purposes	(a) 898,207
		Under Mines Department	452,244
		Perpetual Leases Selections and Perpetual Lease Prickly Pear Selections	6,376,577
		Auction Perpetual Leases, etc.	29,640
		Prickly Pear Leases	11,080
		Forest Grazing Leases (of Reserves)	1,972,800
Total	22,417,958	Total	354,777,486
		4. *Reserves (Net, not leased), Surveyed Roads and Surveyed Stock Routes*	20,054,821
2. *In Process of Alienation*	5,365,855	5. *Unoccupied*	26,503,880

Total area of State—429,120,000 acres.

(a) Special leases of Crown Land, 466,208 acres; special leases of reserves, 431,999 acres.

5. **South Australia.**—The area of South Australia is 243,244,800 acres and at 30th June, 1946, 5.4 per cent. was alienated; 0.4 per cent. in process of alienation; 57.1 per cent. occupied under leases and licences; and 37.1 per cent. unoccupied or occupied by the Crown.

The subjoined table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS: SOUTH AUSTRALIA, 30th JUNE, 1946.

Particulars.	Acres.	Particulars.	Acres.
1. *Alienated—*		3. *Held under Lease and Licence—*	
Sold	12,919,364	Right of Purchase Leases	4,886
Granted for Public Purposes	134,732	Perpetual Leases, including Irrigation Leases	17,105,168
		Pastoral Leases	114,131,213
		Other Leases and Licences	2,992,498
		Mining Leases and Licences	4,661,737
Total	13,054,096	Total	138,895,502
2. *In Process of Alienation*	894,938	4. *Area Unoccupied (a)*	90,400,264

Total area of State—243,244,800 acres.

(a) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. **Western Australia.**—The total area of Western Australia is 624,588,800 acres, of which, at 30th June, 1946, 3.1 per cent. was alienated; 2.0 per cent. was in process of alienation; and 34.0 per cent. was occupied under leases and licences issued either by the Lands or the Mines Departments. The balance of 60.9 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : WESTERN AUSTRALIA, 30th JUNE, 1946.

Particulars.	Acres.	Particulars.	Acres.
1. *Alienated*	19,583,418	3. *Leases and Licences in Force—*	
		(i) Issued by Lands Department—	
2. *In Process of Alienation—*		Pastoral Leases ..	206,708,452
Midland Railway Concessions ..	54,800	Special Leases ..	1,106,205
Free Homestead Farms ..	525,263	Leases of Reserves ..	1,284,198
Conditional Purchases ..	5,176,220	Residential Lots ..	5,181
Selections from the late W. A. Company	5,297	(ii) Issued by Mines Department—	
Selections under the Agricultural Lands Purchase Act ..	445,709	Gold-mining Leases ..	23,916
Homestead or Grazing Leases ..	5,987,359	Mineral Leases ..	38,539
Town and Suburban Lots ..	3,123	Miners' Homestead Leases	29,941
		(iii) Issued by Forests Department—	
		Timber Permits ..	2,966,461
		Total	212,162,893
Total	12,197,771	4. *Area Unoccupied* (*a*)	380,644,718

Total area of State—624,588,800 acres.

(*a*) Includes reservations for roads and various public purposes, 54,816,013 acres.

7. **Tasmania.**—The total area of Tasmania is 16,778,000 acres, of which, at 31st December, 1946, 36.1 per cent. had been alienated; 2.4 per cent. was in process of alienation; 16.3 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (45.2 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : TASMANIA, 31st DECEMBER, 1946.

Particulars.	Acres.	Particulars.	Acres.
1. *Alienated*	6,048,520	3. *Leases and Licences*—continued.	
		(i) Issued by Lands Department—*continued.*	
2. *In Process of Alienation* ..	397,292	Soldier Settlement ..	168,795
		Short-Term Leases ..	15,517
		(ii) Issued by Mines Department	1,702
3. *Leases and Licences—*		Total	2,742,544
(i) Issued by Lands Department—			
Islands	125,142		
Ordinary Leased Land ..	1,973,475		
Land Leased for Timber	401,582	4. *Area Occupied by the Crown or Unoccupied* (*a*)	
Closer Settlement ..	56,331		7,589,644

Total area of State—16,778,000 acres.

(*a*) Includes reservations for roads and various other public purposes, 2,888,657 acres, and lands occupied by Commonwealth or State Departments, 22,319 acres.

8. **Northern Territory.**—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1946, only 0.1 per cent. was alienated; 47.5 per cent. was held under leases and licences; 13.3 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 39.1 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1946:—

ALIENATION AND OCCUPATION OF CROWN LANDS: NORTHERN TERRITORY, 30th JUNE, 1946.

Particulars.	Acres.
1. Alienated	457,269
2. Leased—	
Pastoral leases	108,626,560
Other leases, licences and mission stations	50,578,721
Total	159,205,281
3. Reserves—	
Aboriginal, defence and public requirements ..	44,373,812
4. Unoccupied and unreserved	131,080,438
5. Total area	335,116,800

The Darwin Lands Acquisition Act 1945, operating from 13th September, 1945, empowered the Commonwealth to acquire all land in Darwin and its environs. This caused a decrease of 20,494 acres in alienated area.

9. **Australian Capital Territory.**—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1946 comprised 9.9 per cent. of the total area, land in process of alienation 8.2 per cent., land held under lease and licence 54.5 per cent., land otherwise occupied, including city tenures 5.3 per cent., and unoccupied 22.1 per cent.

The following table gives particulars of land areas in the Australian Capital Territory (excluding the Jervis Bay area) at the end of 1946:—

ALIENATION AND OCCUPATION OF CROWN LANDS: AUSTRALIAN CAPITAL TERRITORY (a) 31st DECEMBER, 1946.

Particulars.	Acres.
1. Alienated	57,825
2. In process of alienation	47,993
3. Leased, etc.—	
Grazing, agriculture, etc., leases	313,647
Grazing licences	3,825
Total	317,472
4. Otherwise occupied (b)	30,870
5. Unoccupied	128,640
6. Total area (a)	582,800

(a) Excludes the Jervis Bay area of 18,000 acres—11,788 acres leased and 6,212 acres otherwise occupied—making a grand total of 600,800 acres. (b) Includes city area tenures.

10. **Summary.**—The following table gives a summary for each State and Territory of the alienation and occupation of Crown lands for 1944, 1945 and 1946:—

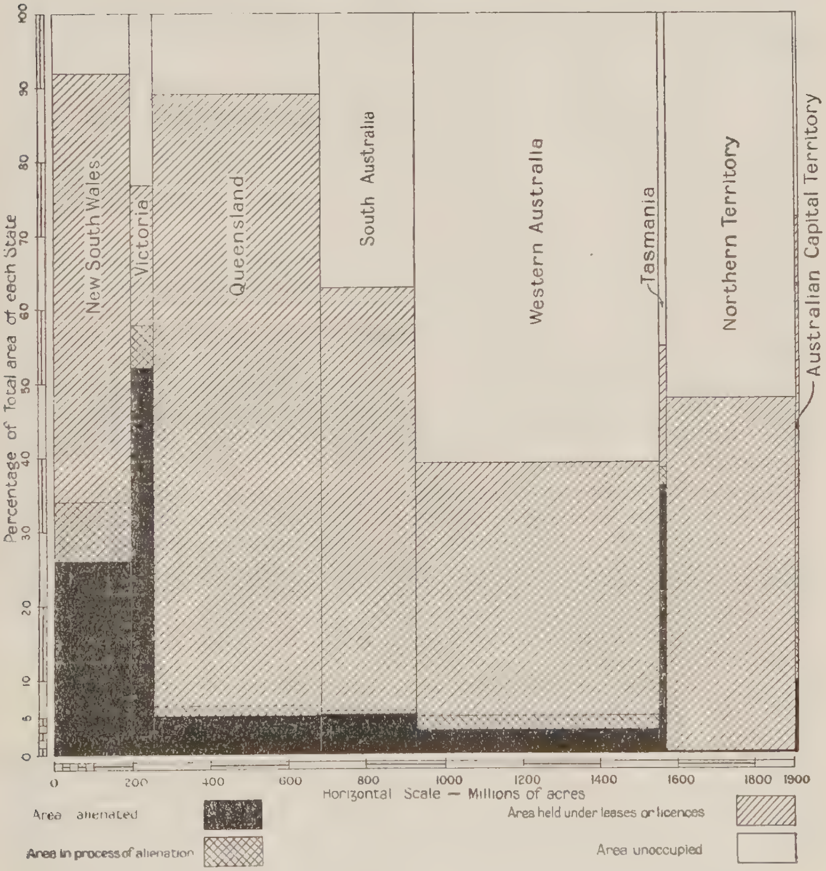
ALIENATION AND OCCUPATION OF CROWN LANDS : AUSTRALIA.

State or Territory.	Private Lands.				Crown Lands.				Total Area.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.
					1944.				
N.S.W. (*a*) ..	51,208	25.86	17,109	8.64	113,728	57.43	15,992	8.07	198,037
Victoria (*b*) ..	28,904	51.39	3,511	6.24	10,113	17.98	13,718	24.38	56,246
Queensland (*b*)	21,946	5.11	5,862	1.37	350,768	81.74	50,544	11.78	429,120
S. Aust. (*a*) ..	12,864	5.29	1,114	0.46	132,995	54.67	96,272	39.58	243,245
W. Aust (*a*) ..	18,946	3.04	12,676	2.03	212,696	34.05	380,270	60.88	624,588
Tasmania (*b*)..	5,997	35.74	416	2.48	2,802	16.70	7,563	45.08	16,778
N.T. (*a*) ..	477	0.14	..	..	156,913	46.82	177,727	53.04	335,117
A.C.T. (*b*) ..	56	9.32	50	8.32	329	54.74	166	27.62	601
Australia ..	140,398	7.37	40,738	2.14	980,344	51.50	742,252	38.99	1,903,732
					1945.				
N.S.W. (*a*) ..	51,445	25.98	16,307	8.23	114,740	57.94	15,545	7.85	198,037
Victoria (*b*) ..	29,087	51.71	3,841	6.83	9,180	16.32	14,138	25.14	56,246
Queensland (*b*)	22,198	5.17	5,605	1.31	355,149	82.76	46,168	10.76	429,120
S. Aust. (*a*) ..	12,960	5.33	962	0.40	136,031	55.92	93,292	38.35	243,245
W. Aust (*a*) ..	19,219	3.08	12,485	2.00	212,331	33.99	380,553	60.93	624,588
Tasmania (*b*)..	6,027	35.92	407	2.43	2,774	16.53	7,570	45.12	16,778
N.T. (*a*) ..	478	0.14	..	..	163,497	48.79	171,142	51.07	335,117
A.C.T. (*b*) ..	58	9.65	48	7.99	329	54.74	166	27.62	601
Australia ..	141,472	7.43	39,655	2.08	994,031	52.22	728,574	38.27	1,903,732
					1946.				
N.S.W. (*a*) ..	51,637	26.08	15,807	7.98	114,887	58.01	15,706	7.93	198,037
Victoria (*b*) ..	29,351	52.18	3,159	5.62	10,597	18.84	13,139	23.36	56,246
Queensland (*b*)	22,418	5.22	5,366	1.25	354,778	82.68	46,558	10.85	429,120
S. Aust. (*a*) ..	13,054	5.37	895	0.37	138,896	57.10	90,400	37.16	243,245
W. Aust. (*a*) ..	19,583	3.14	12,198	1.95	212,163	33.97	380,644	60.94	624,588
Tasmania(*b*) ..	6,048	36.05	397	2.36	2,743	16.35	7,590	45.24	16,778
N.T. (*a*) ..	457	0.14	..	..	159,205	47.51	175,455	52.35	335,117
A.C.T. (*b*) ..	58	9.65	48	7.99	329	54.74	166	27.62	601
Australia ..	142,606	7.49	37,870	1.99	993,598	52.19	729,658	38.33	1,903,732

(*a*) At 30th June. (*b*) At 31st December.

11. **Diagram showing Condition of Public Estate.**—The following diagram shows the condition of the public estate during the year 1946. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated from the State; those in process of alienation under various systems of deferred payments; and the areas held under leases or licences are indicated by the differently-shaded areas as described in the reference given below the diagram, and the areas unoccupied are left unshaded.

TENURE OF LAND.



CHAPTER V.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

In the system of recording statistics of oversea shipping Australia is considered as a unit, and, therefore, only one entry and one clearance is counted for each voyage, without regard to the number of States visited (*see* also Section 5 following, paragraph 1.)

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. Similar documents furnish information regarding oversea migration and interstate migration by sea. This arrangement has been in operation since 1st July, 1924.

The net tonnage is the gross tonnage less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. The unit of measurement is a ton of 100 cubic feet.

From 1st July, 1914, the Trade and Shipping of Australia have been recorded for the fiscal years ending 30th June.

Commencing with 1935–36 particulars of sailing vessels with auxiliary engines, previously included in the columns headed "Steam", have been included in those headed "Sailing", this classification being considered more correct as the main method of propulsion of these vessels is sail.

The outbreak of war with Japan in December, 1941, resulted in Australia becoming the land base of operations in the South-West Pacific Area. The outcome of this action was the transport by sea to Australia of large numbers of Allied troops with huge quantities of arms and equipment, munitions and stores, which resulted in a substantial increase in the volume of shipping in ports throughout Australia. Particulars regarding these vessels have been excluded from the following tables of "oversea" and "interstate" shipping movement except in Section 3, paragraph 1. The published tables, therefore (except Section 3, paragraph 1), relate primarily to vessels engaged in normal trade (i.e., carrying part or full cargo for civil purposes), and are strictly comparable with pre-war figures.

The total volume of all shipping including vessels carrying troops and war supplies which entered the principal ports of Australia during the years 1938–39 and 1942–43 to 1945–46 is shown in Section 3, paragraph 1. These particulars were compiled from information supplied by the State authorities controlling ports and harbours and include all vessels entering ports with the exception of warships. The year 1938–39 has been inserted for comparative purposes.

As a result of enemy activity the Customs Officers were withdrawn from the ports of Thursday Island (Queensland), Broome (Western Australia) and Darwin (Northern Territory) during February, March and April, 1942, respectively, and the ports closed as Customs Stations. Consequently, no particulars are available of shipping movements at these ports between the dates named and June, 1945, as they were still under the control of the defence authorities. Shipping in these ports during this period was predominantly military and naval in character. The port of Darwin (Northern Territory) was reopened as a Customs Station in July, 1945, Broome in December, 1945, and Thursday Island in August, 1946.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and net tonnage of oversea steam and motor vessels and sailing vessels which entered Australian ports during the years 1935–36 to 1945–46 :—

OVERSEA SHIPPING : VESSELS ENTERED, AUSTRALIA.

Year.	Steam and Motor.		Sailing.		Total.	
	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.
		'000.		'000.		'000.
1935–36	1,550	6,200	(a) 65	(a) 38	1,615	6,238
1936–37	1,542	6,246	99	28	1,641	6,274
1937–38	1,800	7,096	105	32	1,905	7,128
1938–39	1,725	6,684	151	27	1,876	6,711
1939–40	1,573	6,459	101	7	1,674	6,466
1940–41	1,260	5,372	56	7	1,316	5,379
1941–42	1,248	5,166	28	8	1,276	5,174
1942–43	943	3,820	13	4	956	3,824
1943–44	1,085	4,482	9	2	1,094	4,484
1944–45	1,051	4,480	8	4	1,059	4,484
1945–46	1,140	5,260	6	3	1,146	5,263

(a) See § 1 above.

The average tonnage per vessel entered has risen from 3,862 tons per vessel in 1935–36 to 4,593 tons in 1945–46.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507, for each year from 1921–22 to 1930–31 in Official Year Book No. 25, p. 189, and for each of the years 1931–32 to 1934–35 in Official Year Book No. 34, p. 81.

2. **Total Oversea Shipping, States.**—The following table gives the numbers and net tonnages of vessels which entered and cleared the various States direct from and to oversea countries during the year 1945–46 :—

SHIPPING ENTERED FROM AND CLEARED TO OVERSEA COUNTRIES DIRECT, 1945–46.

State or Territory.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
		'000.		'000.
New South Wales	452	2,124	437	1,768
Victoria	172	798	171	840
Queensland	193	704	273	1,061
South Australia	75	294	73	276
Western Australia	242	1,299	245	1,375
Tasmania	9	33	20	86
Northern Territory	3	11	6	24
Total	1,146	5,263	1,225	5,430

3. **Shipping Communication with various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same

voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

DIRECTION OF OVERSEA SHIPPING : AUSTRALIA.

Countries.	Cargo and Ballast.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
NET TONNAGE ENTERED. '000.						
United Kingdom and European Countries	Cargo	1,878	355	328	416	795
	Ballast	121	6	3	..	18
New Zealand	Cargo	767	258	182	234	317
	Ballast	242	77	152	80	188
Asiatic Countries and Pacific Islands	Cargo	2,206	1,277	1,240	1,898	2,071
	Ballast	256	142	665	478	445
Africa	Cargo	44	457	236	289	360
	Ballast	123	48	29	..	3
North and Central America	Cargo	1,059	1,095	1,505	982	1,024
	Ballast	..	4	31	43	12
South America	Cargo	10	105	113	64	30
	Ballast	5	..	..	..	..
Total	Cargo	5,964	3,547	3,604	3,883	4,597
	Ballast	747	277	880	601	666
	..	6,711	3,824	4,484	4,484	5,263
NET TONNAGE CLEARED. '000.						
United Kingdom and European Countries	Cargo	2,778	774	701	855	1,205
	Ballast	13	17	4	..	7
New Zealand	Cargo	901	326	307	268	502
	Ballast	37	50	24	27	70
Asiatic Countries and Pacific Islands	Cargo	1,687	1,239	1,915	1,501	1,548
	Ballast	743	241	170	491	889
Africa	Cargo	172	290	306	178	98
	Ballast	6	20	22	21	..
North and Central America	Cargo	440	771	1,093	746	620
	Ballast	46	391	573	429	408
South America	Cargo	12	73	38	39	3
	Ballast	..	97	50	94	80
Total	Cargo	5,990	3,473	4,360	3,587	3,976
	Ballast	845	816	843	1,062	1,454
	..	6,835	4,289	5,203	4,649	5,430

4. **Nationality of Oversea Shipping.**—Due to war conditions, shipping of British nationality progressively declined during the years 1939–40 to 1943–44 to 43.40 per cent. compared with 72.82 per cent. in 1938–39. On the other hand, shipping of United States of America nationality visiting Australia during the same period advanced to

33.07 per cent. in 1943–44 compared with 2.61 per cent. in 1938–39. There was a reversal of this position in the next two years, the shipping of British nationality having in 1945–46 increased to 68.10 per cent., while United States of America shipping declined to 18.72 per cent.

Particulars of the nationality of oversea shipping for the four years ended 30th June, 1946, compared with the year 1938–39, are given in the following table :—

OVERSEA SHIPPING : NATIONALITY OF VESSELS ENTERED, AUSTRALIA.

Nationality.	Net Tonnage.				
	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	'000.	'000.	'000.	'000.	'000.
BRITISH—					
Australian	331	191	279	188	308
United Kingdom	3,744	1,281	1,338	1,713	3,024
Canadian	20	17	80	190	106
New Zealand	563	147	145	114	89
Other British	229	174	104	85	57
Cargo	4,379	1,650	1,500	2,049	3,074
Ballast	508	160	446	241	510
Total British	4,887	1,810	1,946	2,290	3,584
Per cent. on total	72.82	47.33	43.40	51.07	68.10
FOREIGN—					
Danish	55	..	..	..	3
Dutch	291	247	271	122	132
French	108	7	9	19	37
German	141	..	..	..	..
Italian	68	..	..	..	..
Japanese	330	..	..	..	10
Norwegian	325	600	470	301	213
Swedish	124	114	80	90	116
United States of America	175	943	1,483	1,463	985
Other Foreign	207	103	225	199	183
Cargo	1,585	1,897	2,104	1,834	1,523
Ballast	239	117	434	360	156
Total Foreign	1,824	2,014	2,538	2,194	1,679
Per cent. on total	27.18	52.67	56.60	48.93	31.90
Cargo	5,964	3,547	3,604	3,883	4,597
Per cent. on total	88.87	92.75	80.38	86.60	87.35
Ballast	747	277	880	601	666
Per cent. on total	11.13	7.25	19.62	13.40	12.65
Grand Total	6,711	3,824	4,484	4,484	5,263

The Australian tonnage which entered Australia from overseas during the year 1945–46 represented 5.85 per cent. of the total tonnage entered and was mainly confined to the New Zealand and Pacific Island trade.

§ 3. Shipping of Principal Ports.

1. **Total Shipping, Australia.**—The following table, which has been compiled from information supplied by the State authorities controlling ports and harbours, shows the total volume of shipping—oversea, interstate and coastwise—which entered the principal ports of Australia during the years 1942–43 to 1945–46 compared with 1938–39, irrespective of whether these vessels were transporting civilian goods or troops and war equipment. Warships are excluded from the table.

TOTAL SHIPPING OF PRINCIPAL PORTS : AUSTRALIA.

Port of Entry.	1938–39.		1942–43.		1943–44.		1944–45.		1945–46.	
	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.
		'000.		'000.		'000.		'000.		'000.
New South Wales—										
Sydney ..	7,384	11 650	3,773	5,544	3,695	5,953	3,805	6,479	3,671	6,286
Kembla ..	850	1,225	476	778	468	847	447	901	299	606
Newcastle ..	4,272	5,099	2,675	3,156	2,584	3,312	2,308	3,013	2,307	2,957
Victoria—										
Melbourne ..	3,384	8,537	1,846	3,400	1,649	3,279	1,777	4,612	1,650	3,632
Geelong ..	486	850	233	443	144	287	115	363	126	158
Queensland—										
Brisbane ..	1,472	4,916	1,134	2,589	1,495	3,936	904	2,551	482	1,413
Bowen ..	188	336	265	352	245	328	256	294	96	168
Cairns ..	725	790	1,135	938	1,022	1,248	801	801	357	312
Gladstone ..	155	526	128	213	228	436	85	120	78	121
Mackay ..	219	546	54	118	46	105	52	121	45	108
Rockhampton ..	252	596	57	40	58	60	49	48	50	60
Thursday Island	158	303	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Townsville ..	641	1,473	820	1,815	1,040	2,440	592	1,326	218	507
South Australia—										
Adelaide ..	2,988	5,524	2,211	1,540	2,475	1,635	2,237	1,668	2,170	1,682
Lincoln ..	438	493	314	389	307	431	374	470	375	454
Pirie	619	815	685	652	397	538	297	584	270	532
Wallaroo ..	281	220	113	101	201	101	213	138	163	116
Whyalla ..	680	1,037	772	1,000	625	987	423	838	360	685
Western Australia—										
Fremantle ..	846	4,012	603	2,624	762	3,153	665	2,644	495	2,427
Albany ..	125	511	27	69	26	90	32	112	46	148
Bunbury ..	107	240	51	115	58	130	70	180	65	174
Carnarvon ..	115	183	60	93	42	72	47	84	54	96
Geraldton ..	132	291	31	98	53	141	102	146	48	128
Tasmania—										
Hobart ..	616	1,153	374	370	454	1,121	251	410	234	369
Burnie ..	577	781	339	294	292	276	228	229	193	237
Devonport ..	492	476	296	280	267	266	282	295	235	241
Launceston ..	460	502	287	149	220	143	272	156	252	169
Northern Territory—										
Darwin ..	176	184	(a)	(a)	(a)	(a)	(a)	(a)	9	31

(a) Port closed.

2. **Australia, New Zealand and United Kingdom.**—A table showing the total shipping tonnage which entered the principal ports of Australia, New Zealand and the United Kingdom during 1938 is published in Official Year Book No. 36, p. 112. Particulars relating to the ports of the United Kingdom are not available for the years subsequent to 1938.

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1938 and 1943 to 1946, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

VESSELS BUILT IN AUSTRALIA.

Year.	Steam.			Motor.(a)			Sailing.			Total.		
	No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.	Tonnage.	
		Gross.	Net.		Gross.	Net.		Gross.	Net.		Gross.	Net.
1938 ..	..	..	..	11	721	394	..	..	..	11	721	394
1943 ..	4	19,850	10,869	1	68	46	..	..	..	5	19,918	10,915
1944 ..	4	20,327	10,843	4	121	82	..	..	..	8	20,448	10,925
1945 ..	5	25,302	14,063	22	1,240	748	2	24	15	29	26,566	14,826
1946 ..	4	9,448	4,571	19	981	678	5	240	160	28	10,669	5,409

(a) Including vessels with auxiliary motors.

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State on the 31st December, 1946:—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1946.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, &c., not Self-propelled.		Total.	
			Propelled by Sail Only.		Fitted with Auxiliary Power.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales	504	75,782	178	6,217	125	1,631	48	9,977	855	93,607
Victoria ..	154	161,143	46	620	60	1,122	50	20,589	310	183,474
Queensland ..	60	16,640	61	874	44	534	24	3,712	189	21,760
South Australia ..	79	28,139	15	307	29	1,467	39	6,258	162	36,171
Western Australia	34	5,319	233	3,392	47	1,187	11	3,676	325	13,574
Tasmania ..	35	3,686	59	2,147	54	1,505	1	382	149	7,720
Northern Territory	..	..	16	154	4	65	..	..	20	219
Total ..	866	290,709	608	13,711	363	7,511	173	44,594	2,010	356,525

3. **World's Shipping Tonnage.**—A table showing the number and gross tonnage of steam and motor, and of sailing vessels owned at the 1st July, 1939, by the most important maritime countries, together with the proportion of the grand total owned by each country is published in Official Year Book No. 36, p. 114. The figures, which were compiled from *Lloyd's Register of Shipping* are not available for later years.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements: (*a*) Vessels engaged solely in interstate trade: and (*b*) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) No complexity enters into the record of those in category (*a*), but with regard to the method of recording the movements of the oversea vessels (*b*) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom *via States*, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movement, must for the individual States be recorded as "Oversea *via* other States" or "Interstate" according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—		
	For the State and for Australia.	For the States.	
Inward Voyage—			
Enters Fremantle from United Kingdom	Oversea direct		
Clears Fremantle for Adelaide ..	.. ..	Interstate direct	
Enters Adelaide from United Kingdom *via* Fremantle	.. ..	.. ..	Oversea *via* States
Clears Adelaide for Melbourne	.. ..	Interstate direct	
Enters Melbourne from United Kingdom *via* Adelaide	.. ..	.. ..	Oversea *via* Stat
Clears Melbourne for Sydney	..	Interstate direct	
Enters Sydney from United Kingdom *via* Melbourne	.. .	.. ..	Oversea *via* States
Outward Voyage—			
Clears Sydney for United Kingdom *via* Melbourne	.. ..	.. ..	Oversea *via* States
Enters Melbourne from Sydney . ..	.. ..	Interstate direct	
Clears Melbourne for United Kingdom *via* Adelaide	.. ..	.. ..	Oversea *via* States
Enters Adelaide from Melbourne ..	.. ..	Interstate direct	
Clears Adelaide for United Kingdom *via* Fremantle..	.. ..	.. ..	Oversea *via* States
Enters Fremantle from Adelaide ..	.. ..	Interstate direct	
Clears Fremantle for United Kingdom ..	Oversea direct		

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (*a*) The aggregate of all ships recorded for each State as "Oversea *direct*" gives the oversea shipping for Australia as a whole;

(*b*) the aggregate for all ships recorded in any State as "Oversea *direct*" plus those recorded as "Oversea *via States*" gives the total *oversea shipping* for that State; and (*c*) the aggregate for all ships recorded as "Oversea *via States*" may also be used, together with those recorded as "Interstate *direct*," to furnish figures showing the total interstate *movement* of shipping.

It should be remembered, however, that all oversea vessels do not follow the same itinerary as the vessel in the table above.

2. **Interstate Movement.**—(i) *Interstate direct.* The following table gives the number and tonnage of vessels recorded as having entered each State from any other State (including *oversea* vessels on interstate direct voyages) during each of the years 1942–43 to 1945–46 compared with the year 1938–39. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded:—

INTERSTATE SHIPPING: NUMBER AND TONNAGE OF VESSELS ENTERED.

State or Territory.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
			NUMBER.		
New South Wales ..	2,183	1,310	1,282	1,209	1,112
Victoria	2,243	1,356	1,210	1,143	1,104
Queensland	639	388	389	410	303
South Australia	1,036	527	562	573	482
Western Australia ..	382	159	209	192	221
Tasmania	1,301	845	773	739	695
Northern Territory ..	39	(*a*)	(*a*)	(*a*)	6
Total	7,823	4,585	4,425	4,266	3,923
			NET TONNAGE. '000.		
New South Wales ..	6,205	2,622	2,535	2,391	2,439
Victoria	4,751	1,888	1,741	1,798	1,815
Queensland	1,730	570	621	763	587
South Australia	3,322	1,238	1,414	1,471	1,247
Western Australia ..	2,019	622	745	684	1,045
Tasmania	1,770	625	604	635	674
Northern Territory ..	103	(*a*)	(*a*)	(*a*)	20
Total	19,900	7,565	7,660	7,742	7,827

(*a*) Port of Darwin closed.

From 1938–39 the total net tonnage declined steadily each year until 1942–43, when it represented only 38 per cent. of the total for the pre-war year, and remained practically unchanged during the next three years, the total for 1945–46 being 39 per cent. of the 1938–39 total.

(ii) *Oversea via States.* To ascertain the aggregate movement of shipping between the States, including the total interstate movements of oversea vessels, the figures in the following table which give the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the preceding table :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES.

State or Territory.	Entered.		Cleared.		Total.	
	Vessels.	Net Tonnage. '000.	Vessels.	Net Tonnage. '000.	Vessels.	Net Tonnage '000.
			1944–45.			
New South Wales ..	137	614	189	762	326	1,376
Victoria	122	601	100	452	222	1,053
Queensland	63	364	31	137	94	501
South Australia ..	39	189	74	300	113	489
Western Australia ..	10	44	6	27	16	71
Tasmania	13	61	9	33	22	94
Northern Territory ..	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
Total ..	384	1,873	409	1,711	793	3,584
			1945–46.			
New South Wales ..	197	964	219	1,081	416	2,045
Victoria	166	873	137	598	303	1,471
Queensland	99	546	52	224	151	770
South Australia ..	40	192	76	306	116	498
Western Australia ..	7	34	10	34	17	68
Tasmania	24	126	24	105	48	231
Northern Territory ..	..	..	..	..	..	..
Total ..	533	2,735	518	2,348	1,051	5,083

(*a*) Port of Darwin closed.

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

(iii) *Total, Australia.* The appended table shows the total interstate movement of shipping, including oversea vessels travelling oversea via States and interstate direct, for each of the years 1938–39, and 1942–43 to 1945–46 :—

TOTAL INTERSTATE MOVEMENT OF SHIPPING : AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
		'000.		'000.
1938–39	9,603	29,977	9,669	30,000
1942–43	4,953	9,175	5,010	9 358
1943–44	4,780	9,393	4,848	9,471
1944–45	4,650	9,615	4,716	9,709
1945–46	4,456	10,562	4,491	10,584

(iv) *Total, States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during the years 1944–45 and 1945–46, including the interstate movements of oversea vessels :—

TOTAL INTERSTATE SHIPPING OF EACH STATE.

State or Territory.	1944–45.				1945–46.			
	Entered.		Cleared.		Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
		'000.		'000.		'000.		'000.
New South Wales	1,346	3,005	1,426	3,491	1,309	3,403	1,350	3,740
Victoria ..	1,265	2,399	1,300	2,443	1,270	2,688	1,263	2,643
Queensland ..	473	1,127	458	912	402	1,133	377	884
South Australia ..	612	1,660	606	1,557	522	1,439	539	1,470
Western Australia	202	728	185	651	228	1,079	245	1,097
Tasmania ..	752	696	741	655	719	800	715	748
Northern Territory	(*a*)	(*a*)	(*a*)	(*a*)	6	20	2	2
Total ..	4,650	9,615	4,716	9,709	4,456	10,562	4,491	10,584

(*a*) Port of Darwin closed.

3. **Vessels engaged Solely in Interstate Trade.**—The following table gives the number and net tonnage of vessels engaged solely in interstate trade which entered the ports of each State direct from other States during the years 1944–45 and 1945–46.

VESSELS ENGAGED SOLELY IN INTERSTATE TRADE: NUMBER AND TONNAGE OF VESSELS ENTERED.

State or Territory.	Vessels Entered.			
	1944–45.		1945–46.	
	No.	Net Tonnage.	No.	Net Tonnage.
		'000.		'000.
New South Wales	1,043	1,768	876	1,506
Victoria	1,014	1,314	949	1,200
Queensland	300	417	217	313
South Australia	417	905	353	725
Western Australia	64	150	67	168
Tasmania	705	526	643	521
Northern Territory	(*a*)	(*a*)	3	12
Total	3,543	5,080	3,108	4,445

(*a*) Port of Darwin closed.

4. **Interstate and Coastal Services.**—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1943 to 1946 compared with the year 1938 :—

INTERSTATE AND COASTAL STEAMSHIP SERVICES IN AUSTRALIA.

Particulars.		1938.	1943.	1944.	1945.	1946(*b*).
Number of companies operating		30	27	26	25	26
Number of steamships		167	117	117	120	158
Tonnage	Gross	366,182	286,884	283,233	287,498	480,089
	Net	200,131	159,658	157,824	160,012	275,921
Horse-power (Nominal)		39,598	27,597	27,414	27,280	41,210
Number of passengers for which licensed(*a*)	1st class	3,909	2,107	2,088	2,056	1,808
	2nd class and steerage	1,719	961	961	961	627
Complement of Crew	Master and officers	557	435	431	446	585
	Engineers	606	444	443	454	644
	Crew	4,663	3,331	3,320	3,384	4,732

(*a*) Excluding purely day passenger accommodation. (*b*) Includes vessels under the control of the Australian Shipping Board.

§ 6. Tonnage of Cargo.

1. **Oversea and Interstate Cargo.**—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in all ports for the years 1942–43 to 1945–46 compared with the year 1938–39. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

CARGO MOVEMENT : AUSTRALIA.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight. '000.	Tons Meas. '000.	Tons Weight. '000.	Tons Meas. '000.	Tons Weight. '000.	Tons Meas. '000.
1938–39	4,208	2,191	5,138	1,093	7,221	1,731
1942–43	3,654	1,424	2,380	1,257	7,604	1,808
1943–44	4,138	1,781	3,355	1,702	7,517	1,722
1944–45	4,343	1,797	3,060	1,811	7,666	1,640
1945–46	4,600	1,649	2,462	1,470	6,216	1,213

(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at principal ports during 1945–46. Comparable figures for the year 1944–45 appear in *Transport and Communication Bulletin* No. 36

TONNAGE(*a*) OF CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1945–46.

Port.	Discharged.			Shipped.		
	Oversea.	Interstate.	Total.	Oversea.	Interstate.	Total.
	Tons '000.	Tons '000.	Tons '000.	Tons '000.	Tons '000.	Tons '000.
Sydney	2,374	1,175	3,549	1,252	444	1,696
Kembla	106	408	514	103	227	330
Newcastle	145	1,013	1,158	195	2,473	2,668
Other	..	..	..	11	3	14
Total, New South Wales	2,625	2,596	5,221	1,561	3,147	4,708
Melbourne	1,437	2,146	3,583	766	802	1,568
Geelong	208	155	363	2	34	36
Other	25	..	25	4	..	4
Total, Victoria ..	1,670	2,301	3,971	772	836	1,608
Brisbane	708	347	1,055	320	182	502
Cairns	35	43	78	77	116	193
Townsville	56	52	108	110	76	186
Other	22	65	87	57	174	231
Total, Queensland ..	821	507	1,328	564	548	1,112
Adelaide	312	1,028	1,340	242	330	572
Pirie	28	124	152	140	202	342
Wallaroo	34	1	35	30	41	71
Whyalla	..	93	93	..	1,256	1,256
Other	28	55	83	47	58	105
Total, South Australia ..	402	1,301	1,703	459	1,887	2,346
Fremantle	559	389	948	332	183	515
Bunbury	25	1	26	50	86	136
Geraldton	25	..	25	63	34	97
Other	10	13	23	3	15	18
Total, Western Australia	619	403	1,022	448	318	766
Hobart	102	323	425	69	226	295
Devonport	9	64	73	9	140	149
Launceston	..	135	135	10	128	138
Other	1	81	82	30	192	222
Total, Tasmania ..	112	603	715	118	686	804
Darwin (Northern Territory)	..	7	7	10	7	17
Total, AUSTRALIA ..	6,249	7,718	13,967	3,932	7,429	11,361

(*a*) Tons weight and tons measurement combined

2. **Nationality.**—The following table shows the total oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1942–43 to 1945–46 compared with the year 1938–39 :—

TONNAGE(*a*) OF OVERSEA CARGO DISCHARGED AND SHIPPED.

Vessels Registered at Ports in—	Net Tonnage.				
	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	'000.	'000.	'000.	'000.	'000.
British Countries—					
Australia	416	276	323	305	433
United Kingdom ..	7,731	2,641	3,358	4,057	4,982
Canada	53	75	242	568	351
New Zealand	503	435	375	320	243
Other British	446	344	242	260	167
Total British ..	9,149	3,771	4,540	5,510	6,176
Per cent. on Total ..	72.43	43.27	41.37	50.05	60.66
Foreign Countries—					
Denmark	184	..	..	..	22
France	189	25	18	43	47
Germany	370	..	..	..	..
Italy	84	..	..	..	..
Japan	260	..	..	..	..
Netherlands(*b*) ..	573	370	196	193	234
Norway	834	1,640	1,387	911	578
Sweden	354	472	415	412	379
United States of America	159	2,140	3,870	3,480	2,286
Other Foreign	475	297	549	461	459
Total Foreign ..	3,482	4,944	6,435	5,500	4,005
Per cent. on Total ..	27.57	56.73	58.63	49.95	39.34
Grand Total ..	12,631	8,715	10,975	11,010	10,181

(*a*) Tons weight and tons measurement combined. (*b*) Includes Netherlands East Indies.

Owing to war conditions the percentage of cargo carried in British vessels decreased from 72.43 in 1938–39 to 41.37 in 1943–44, but increased to 50.05 in 1944–45 and to 60.66 in 1945–46. On the other hand the percentage of cargo carried on foreign vessels increased from 27.57 in 1938–39 to 58.63 in 1943–44, but decreased to 49.95 in 1944–45 and to 39.34 in 1945–46.

§ 7. Control of Shipping.

1. **War-time Control.**—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939–45 War is given in Official Year Book No. 36, pp. 121–130.

2. **Post-war Control.**—Following on the termination of hostilities in Europe and with the end of the war in the Pacific in prospect, a review was made of the war-time controls in the light of the then existing circumstances.

On 1st January, 1946, the Shipping Co-ordination Regulations were substantially amended. The amended Regulations provided for the establishment of an Australian Shipping Board to exercise the functions of the Shipping Control Board, Commonwealth Ships Chartering Committee and the Central Cargo Control Committee previously established separately under these Regulations; and also of the Marine Salvage Board which was constituted under other National Security Regulations. As a result of this action the activities of the various war-time shipping authorities were consolidated and considerable economies in administration were secured. The amendments also had the effect of repealing some war-time powers previously exercised by these bodies, notably the Cargo Control Committee.

At about the same time the Allied Consultative Shipping Council, the British-American-Australian Shipping Sub-Committee and the Port Equipment and Development Committee which had operated during the war, although not under any specific regulations, also lapsed.

During the war period allied control of shipping was exercised through an international body known as the United Maritime Authority which had branches in London and Washington and whose functions were, in brief, to allocate the available pool of shipping to the various Allied Nations so as to make the best overall use of the ships under the control of those Nations. The Agreement under which this body operated expired on the 2nd March, 1946. With the expiry of the United Maritime Authority the international war-time control of shipping lapsed and was replaced, under the auspices of the United Maritime Consultative Council, by arrangements for international co-operation, as, for example, through a voyage licensing system. A modified scheme was also continued which provided for the provision of ships for the lifting of relief supplies for Europe, and the United Maritime Consultative Council was utilized to facilitate the exchange of information on shipping as between Governments.

During the period the United Maritime Authority operated, Australia had been allotted a number of ships to assist in the carriage of cargoes around the coast and for the servicing of troops in operational areas. With the expiry of United Maritime Authority these vessels were returned to their owners. By arrangement with the United Kingdom Authorities, however, the Australian Shipping Board was able to negotiate for the charter of an average of 15 vessels for use on the coast and in June, 1947, these vessels were operating in Australian waters.

Following the cessation of hostilities, the majority of the vessels which had been operating under service control were released for commercial use and most of these, after necessary refitting, are now again operating in commercial employment. The end of the war relieved the Australian coastal fleet from its obligations in regard to the servicing of troops in operational areas, but the tonnage available to the Australian Shipping Board continued to be short of requirements, as the Commonwealth undertook the responsibility of assisting in the servicing of troops of the British Commonwealth Occupation Force in Japan, and a demand continued in the islands north of Australia for the return to the mainland of surplus war materials. Furthermore, the end of hostilities brought with it an increased demand on shipping space for the movement of goods necessary for the restoration of industries as well as for the regular movement of coal, iron-stone, sugar and other bulk products.

The difficulties were further increased by the climatic conditions which prevailed in New South Wales and Queensland during the 1944–45 and 1945–46 seasons, which necessitated the carriage of substantial quantities of wheat from other States to the afflicted areas. The net result of these demands was, as stated above, that shipping remained short of requirements, and in order to ensure that the tonnage available was used to the best possible advantage and that all ports received equitable treatment it has been found necessary to continue the requisitioning of vessels of the Australian coastal fleet.

On 18th August, 1947, all requisitioned vessels, with a few exceptions, were released to their owners immediately they returned to their home ports.

In March, 1947, legislation was passed providing for the setting up on a permanent basis of a Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Stevedoring Industry Commission which operated under the Shipping Co-ordination Regulations. The new Commission, appointed on 19th December, 1947, deals with all matters affecting the waterfront industry with the exception of standard hours of work and standard rates of pay which continue to be the function of the Arbitration Court.

The Maritime Industry Commission set up during the war also continues to function, and consideration is being given to the question of whether similar action will be taken to set up a permanent commission to control maritime industries as was done in the case of the waterfront industries.

§ 8. Miscellaneous.

1. **Lighthouses.**—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars were available was published in *Transport and Communication Bulletin* No. 14.

2. **Distances by Sea.**—The distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are shown in *Transport and Communication Bulletin* No. 37.

3. **Shipping Freight Rates.**—The *Quarterly Summary of Australian Statistics* gives a list of the ruling freight rates for general merchandise both in respect of oversea and interstate shipments. The latest figures available, which give the rates current at 31st March, 1948, show that the rate for general merchandise from Australia to United Kingdom and Continent was 123s. 0d. per ton weight or measurement, while the rates for wheat (bagged) and wool (greasy) were respectively 110s. 0d. per ton weight and $1\frac{15}{16}$ + 5 per cent. less $7\frac{1}{2}$ per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of $25\frac{1}{2}$ per cent. when freight is prepaid in Australia.

4. **Depth of Water at Main Ports.**—A table, compiled from information supplied by the Director of Navigation, showing the depth of water available and tides at principal ports of Australia at 1st January, 1947, is included in *Transport and Communication Bulletin* No. 37.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping casualties reported on or near the coast during the years 1940 to 1946 are shown in the table below. This information also was furnished by the Director of Navigation :—

TOTAL SHIPPING CASUALTIES AND LOSSES : AUSTRALIA.

Year ended 31st December—	Total Losses of Vessels.			Total Casualties to Vessels.		
	Number.	Net Tonnage.	Lives Lost.	Number.	Net Tonnage.	Lives Lost.
		'000.			'000.	
1940	6	16	34	237	419	34
1941	1	(a)	7	161	326	7
1942	20	53	138	233	512	147
1943	14	37	439	215	440	453
1944	5	16	1	192	498	1
1945	2	4	4	179	432	4
1946	..	..	..	173	395	..

(a) Less than 500 net tons.

6. **Commonwealth Navigation and Shipping Legislation.**—An account in some detail of the Commonwealth navigation and shipping legislation is contained in Official Year Book No. 17 (pp. 1053–5).

Under the provisions of the Navigation Act the coasting trade of Australia in passengers and cargo is reserved by Section 288 to ships licensed to engage in that trade. Licences are granted to ships complying with Australian conditions respecting wages, manning, crew accommodation, and so on, stipulations which have confined the trade to Australian-owned vessels.

Provision was made in the Act for permits to be granted to unlicensed British ships to carry cargo and passengers on the coast when it was shown that the licensed service was inadequate. The permit system, however, was not entirely satisfactory and in 1926 the Act was amended to allow the Governor-General, by notice in the *Gazette*, to permit unlicensed British ships of a specified size and speed to engage in the passenger trade between particular ports. Such a permit, however, could only be granted when it was shown that the tourist traffic was being injured or retarded. By a further amendment in 1935, this concession was revised to permit unlicensed British ships of not less than 10,000 tons and a sea speed of not less than 14 knots to carry passengers between any two ports in Australia not connected by rail. In every case the voyage must be made in one ship without break of journey, transhipment, or second call at any intermediate port. On arriving at the port of destination the passenger may be taken on to the next port of call of the ship, which may be his first port of embarkation, or a further port not connected by rail.

In the Navigation Act of 1935 also the carriage of wireless equipment was extended to all ships engaged in interstate trade. A similar provision for intra-state vessels has been made by some of the States.

The Navigation (Maritime Conventions) Act of 1934 was an amendment of the Navigation Act to enable the Commonwealth to give effect to the provisions of a number of maritime conferences of recent years, of which the most important were those dealing with the safety of life at sea and load lines.

The war-time and post-war control of shipping is referred to in Section 7.

7. **Ports and Harbours.**—A report in two volumes on "Transport in Australia," with special reference to Ports and Harbours facilities, was submitted to the Commonwealth Government by Sir George Buchanan, and published as two Parliamentary Papers (No. 86 printed 14th March, 1927, and No. 108 printed 9th May, 1927).

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1946, only 648 route miles of the 27,861 open for general traffic in Australia were privately owned, while 25,012 route miles and 2,201 route miles were owned by the State Governments and the Commonwealth respectively. In the following tables details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line are given in *Transport and Communication Bulletin* No. 37, issued by this Bureau, and also in Official Year Book No. 31, p. 125, et seq.

2. **Railways Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Official Year Book No. 6, p. 681. Further information regarding railway communication in Australia is given in Official Year Book No. 22, pp. 259–61.

3. **Standardization of Railway Gauges.**—(i) *Sir Harold Clapp's Recommendations.* In March, 1944, Sir Harold Clapp, Director-General of Land Transport, Commonwealth Department of Transport and formerly Chairman of Commissioners, Victorian Railways, was requested by the Commonwealth Government to submit a report and recommendation regarding the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge.

The report, which also covers the construction of certain strategical and developmental railways, was submitted in March, 1945, and the projects recommended, estimated to cost £76,751,000, were as follows :—(*a*) construction of an independent standard gauge line from Fremantle–Perth to Kalgoorlie (419 miles) ; (*b*) conversion to standard gauge of the entire South Australian 5 ft. 3 in. gauge system and the 3 ft. 6 in. gauge lines of the South Eastern Division (1,760 miles) ; (*c*) conversion to standard gauge of the entire Victorian 5 ft. 3 in. gauge system, and the Upper Ferntree Gully-Emerald section of the Gembrook 2 ft. 6 in. gauge line (4,980 miles) ; (*d*) acquisition of the Silverton Tramway Company's line (36 miles) between Cockburn (South Australia) and Broken Hill (New South Wales) and the conversion to standard gauge of such line, as well as the 3 ft. 6 in. gauge lines of the Peterborough Division of the South Australian Railways (366 miles) to provide a standard gauge line between Port Pirie and Broken Hill ; (*e*) provision of a standard gauge strategic and developmental railway linking Bourke (New South Wales) with Townsville and Dajarra and tributary lines (Queensland) via Cunnamulla, Charleville, Blackall, Longreach, Winton and Hughenden (1,544 miles) ; (*f*) construction of a standard gauge strategic and developmental railway between Dajarra (Queensland) and Birdum (Northern Territory) and the conversion to standard gauge of the Birdum–Darwin line (961 miles).

Other recommendations were that on agreement being reached between the Commonwealth and the States as to the carrying out of the foregoing projects arrangements be made for complete surveys, plans and estimates to be prepared for the standardization of the Queensland and Western Australian Railways not covered by the proposals mentioned.

The conversion to standard gauge of the 3 ft. 6 in. gauge Central Australia Railway (Port Augusta to Alice Springs) and the extension thereof beyond the existing terminal at Alice Springs was not recommended, nor was the introduction of standard gauge in Tasmania.

Projects (*a*) to (*e*) were estimated to take up to eight years to complete and (*f*) three years later. The work of constructing the last-mentioned line (Northern Territory) which is dependent on the completion of the standard gauge railway through Central Queensland to Dajarra would not be commenced until the sixth year.

Man-power to be absorbed in the projects would be equivalent to approximately 103,000 man-years. Something like 850,000 tons of steel for rails and fastenings, metal sleepers, rolling stock construction, etc., would be required, as well as 12 million timber sleepers and 26 million super. feet of sawn timber.

The project involves the conversion of 8,470 miles of existing railways, the construction of 1,600 miles of new railways, and the building of 578 locomotives and 9,746 items of rolling stock. In addition the scheme provides for the conversion of 412 locomotives and 26,000 items of rolling stock.

The report includes a chapter on standardization and modernization of railway equipment and the opinion is expressed that " standardization without modernization would not be justified ".

Modernization proposals cover increased speeds of trains, welding of rails, reductions in the tare weight of passenger and goods rolling-stock by the use of special alloy steels such as "Cor-Ten", modernization of passenger cars, greater use of electric traction on dense traffic routes, Diesel-electric locomotives for special work, Fork lift trucks and the establishment of a car and wagon interchange bureau.

The utilization of appropriate government ordnance and munitions factories and annexes with the existing personnel and plant is recommended to assist existing railway workshops in the very large locomotive and rolling stock construction programme involved.

(ii) *Agreement between the Commonwealth and New South Wales, Victoria and South Australia.* In order to implement the Commonwealth Government's desire to bring about the standardization of gauges Commonwealth–State discussions have taken place from time to time. Arising from these discussions a Railway Standardization Agreement was signed in 1946 between the Commonwealth of Australia and the States of New South Wales, Victoria and South Australia. This agreement was ratified by the Commonwealth of Australia on the 15th August, 1946, under the Railway Standardization Agreement Act (No. 50 of 1946).

Works for the standardization of railway gauges to be executed are set out under clause 10 of the Act as follows :—

(*a*) Conversion to standard gauge of the entire South Australian 5 ft. 3 in. gauge system, and of the 3 ft. 6 in. gauge lines of the South-Eastern Division, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion, and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

(*b*) Conversion to standard gauge of the entire Victorian 5 ft. 3 in. gauge system and the 2 ft. 6 in. gauge line from Ferntree Gully to Emerald, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion, and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

(*c*) Acquisition by the State of New South Wales and conversion to standard gauge of the 3 ft. 6 in. gauge line of the Silverton Tramway Company Limited between Cockburn, South Australia, and Broken Hill, New South Wales, and of the locomotives, rolling stock and equipment of that company, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

(*d*) Conversion to standard gauge of the 3 ft. 6 in. gauge lines of the Peterborough Division of the South Australian Railways, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion, and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

* (*e*) Conversion to standard gauge of the 3 ft. 6 in. gauge lines of the Commonwealth Railways from Port Augusta to Alice Springs, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion, and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

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* Not included in Clapp Report recommendations. The undertaking for the construction of a north south trans-continental railway formed part of the obligations of the Commonwealth to South Australia under the Northern Territory Acceptance Act 1910.

(*f*) Construction of a new standard gauge line in New South Wales from Bourke to Barringun.

*(*g*) Construction of a new standard gauge railway from Alice Springs to Birdum and the construction of the standard gauge locomotives and rolling stock necessary to operate this line.

(*h*) Conversion to standard gauge of the 3 ft. 6 in. gauge Commonwealth Railway line from Birdum to Darwin, the conversion to standard gauge of existing locomotives and rolling stock suitable for conversion and the construction of standard gauge locomotives and rolling stock to the extent necessary to replace the existing capacity of all units unsuitable for conversion to standard gauge.

(*i*) The provision of terminal facilities rendered necessary by the conversion of any line specified in the foregoing provision of this clause.

The main financial provisions of the Act are covered under clause 23 as follows :—

(1) The Commonwealth shall bear the whole cost of the standardization works set out in paragraphs (*e*), (*g*) and (*h*) of clause 10 of this Agreement.

(2) The cost of the standardization works set out in paragraphs (*a*) and (*d*) of clause 10 of this Agreement shall be borne as follows :—

(*a*) The cost of construction of new locomotives and rolling stock to replace existing units of the South Australian railways system unsuitable for conversion, up to a maximum of £3,684,064 shall be borne by the State of South Australia, and if the total cost of such construction exceeds £4,912,085, the Commonwealth shall bear the amount of the excess.

(*b*) One-half of that part of the cost of the said standardization works which is not borne as mentioned in paragraph (*a*) of this sub-clause shall be borne by the Commonwealth, and the other half shall be borne by the States and shared on a *per capita* basis of population ;

(3) The cost of the standardization works set out in paragraph (*b*) of clause 10 of this Agreement shall be borne as follows :—

(*a*) The cost of construction of new locomotives and rolling stock to replace existing units of the Victorian railways system unsuitable for conversion up to a maximum of £8,462,768 shall be borne by the State of Victoria, and if the total cost of such construction exceeds £11,283,690, the Commonwealth shall bear the amount of the excess.

(*b*) One-half of that part of the cost of the said standardization works which is not borne as mentioned in paragraph (*a*) of this sub-clause shall be borne by the Commonwealth and the other half shall be borne by the States and shared on a *per capita* basis of population,

(4) One-half of the cost of the standardization works set out in paragraphs (*c*) and (*f*) of clause 10 of this Agreement shall be borne by the Commonwealth, and the other half shall be borne by the States and shared on a *per capita* basis of population.

The Act shall be inoperative until the Agreement has been approved by legislation in the States concerned.

The necessary legislation has been passed in the State of South Australia, but the States of New South Wales and Victoria have not approved the Agreement to date.

It is estimated that the construction of the uniform gauge in the three States will take seven years.

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* Not included in Clapp Report recommendations. The undertaking for the construction of a north south trans-continental railway formed part of the obligations of the Commonwealth to South Australia under the Northern Territory Acceptance Act 1910.

(iii) *Historical.* For the history of the adoption of the various existing railway gauges by the several States and particulars of the scheme for unification of gauge advocated by a Royal Commission in 1921 *see* Official Year Book, No. 15, pp. 534–6.

4. **Government Railways. Lines under Construction and Lines Authorized, 1946.**—(i) *Lines under Construction.* In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

(*a*) *New South Wales.* Construction work on the Sandy Hollow to Maryvale line (approximately 147 miles) and on the connecting link between St. James and Wynyard stations of the underground railway of Sydney has been recommenced following on funds being made available for this work. Work on the new Hawkesbury River railway bridge and approach tunnels was completed during the year and the bridge was opened for traffic on 1st July, 1946. The duplication of track on the main Southern line between Cootamundra and Junee has made good progress, and work was continued in stages on the comprehensive long-range scheme for the quadruplication of tracks on the main Western line between Lidcombe and Penrith. Preliminary surveys have been carried out and the permanent traverse of the base survey established for both the Eastern Suburbs railway (Central Station and Rushcutters Bay) and Southern Suburbs railway (Central Station and Redfern).

(*b*) *Other.* At 30th June, 1946, no construction work on new lines was in progress in Victoria, Queensland, South Australia, Western Australia, Tasmania, nor for the Commonwealth Government.

(ii) *Lines Authorized for Construction.* In the States of New South Wales, Victoria, Queensland, South Australia and Western Australia at the 30th June, 1946, there were certain lines authorized for construction but not commenced. These lines were authorized many years ago, some as early as 1910 and none later than 1933. Particulars may be found in Official Year Book No. 36, p. 133. There have been no later authorizations.

5. **Grafton-South Brisbane (Uniform Gauge) Line.**—The 4 ft. 8½ in. gauge line from Grafton (New South Wales) to Brisbane (Queensland) which was opened for traffic on 27th September, 1930, was constructed under agreement between the Commonwealth and the States of New South Wales and Queensland to overcome the break of gauge between Sydney and Brisbane; and was the first step towards uniform gauge railway communication between the capitals of the mainland States. To 30th June, 1946, the capital cost of construction and equipment was £4,362,500, and the working of the line, which is the responsibility of the New South Wales and Queensland Railway Commissioners, resulted in a profit of £90,124 being shown on the New South Wales section and a profit of £146,151 on the Queensland section. The interest charge for the year 1945–46 was £198,638, payable as follows—New South Wales, £63,457, and Queensland, £23,763, the remainder, £111,418, being borne by the Commonwealth. Figures relating to the operations, etc., of the line are incorporated as far as possible with those for New South Wales and Queensland in the tables which follow. Further particulars of the construction of the line will be found in Official Year Book, No. 31, p. 122.

6. **Mileage Open for Traffic, all Lines.**—(i) *General.* Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods, and it should be understood that the private lines included in the tables below form only a small part of all private railways in Australia.

The following table shows the route mileage of Commonwealth, State and private lines open for general traffic in each State at different periods since the inauguration of railways in Australia in 1854 up to the year 1945–46 :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE OPEN.

Year.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1855 ..	14	2	..	7	..	..	..	..	23
1861 ..	73	114	..	56	..	..	..	..	243
1871 ..	358	276	218	133	12	45	..	..	1,042
1881 ..	1,040	1,247	800	845	92	168	..	..	4,192
1890–91 ..	2,263	2,763	2,205	1,666	656	425	145	..	10,123
1900–01 ..	2,926	3,238	2,904	1,736	1,984	618	145	..	13,551
1910–11 ..	4,027	3,574	4,390	1,993	3,208	675	145	..	18,012
1920–21 ..	5,402	4,337	7,013	3,463	4,906	877	199	5	26,202
1930–31 ..	6,160	4,742	6,795	3,932	4,911	806	317	5	27,668
1940–41 ..	6,196	4,784	6,750	3,861	5,112	758	490	5	27,956
1941–42 ..	6,195	4,791	6,750	3,861	5,112	758	490	5	27,962
1942–43 ..	6,195	4,783	6,750	3,850	5,112	757	490	5	27,942
1943–44 ..	6,194	4,761	6,750	3,848	5,112	758	490	5	27,918
1944–45 ..	6,182	4,761	6,702	3,850	5,112	759	490	5	27,861
1945–46 ..	6,182	4,761	6,702	3,850	5,112	759	490	5	27,861

(ii) *Government and Private Lines Separately.* The next table shows for each State (*a*) the length of lines open for traffic owned by the State Government, and by the Commonwealth Government in that State and ; (*b*) the length of private lines available for general use by the public :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE CLASSIFIED, 1945–46.

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.
	State.	Commonwealth.		
	Miles.	Miles.	Miles.	Miles.
New South Wales	6,128	..	54	6,182
Victoria	4,748	..	13	4,761
Queensland	6,566	..	136	6,702
South Australia	2,547	1,252	51	3,850
Western Australia	4,381	454	277	5,112
Tasmania	642	..	117	759
Northern Territory	..	490	..	490
Aust. Cap. Territory ..	..	5	..	5
Australia	25,012	2,201	648	27,861

7. **Comparative Railway Facilities.**—The mileage of line open to the public for general traffic (including both Government and private lines) is shown in the following statement in relation to both population and area at 30th June, 1946 :—

GOVERNMENT AND PRIVATE RAILWAYS : COMPARISON OF FACILITIES, 1945–46.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Mileage of Railway—									
Per 1,000 of population.. ..	2.10	2.35	6.15	6.06	10.38	3.01	46.42	0.32	3.73
Per 1,000 sq. miles of Territory ..	19.98	54.17	10.00	10.13	5.24	28.95	0.94	5.32	9.37

8. **Classification of Lines according to Gauge, 1945–46.**—The next table gives a classification according to gauge of the route mileage open of (*a*) Commonwealth railways, given in the State or Territory in which situated; (*b*) State railways; and (*c*) Private railways open to the public for general traffic. Particulars of Government railways are up to 30th June, 1946, and of private railways open for general traffic to 31st December, 1945, as nearly as possible.

GOVERNMENT AND PRIVATE RAILWAYS: GAUGES, 1945–46.

State or Territory in which situated.	Route mileage having a gauge of—					Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	
COMMONWEALTH RAILWAYS.						
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia ..	..	654	598	..	..	1,252
Western Australia ..	..	454	..	..	..	454
Northern Territory ..	..	..	490	..	..	490
Aust. Cap. Territory	..	5	..	..	..	5
Total ..	..	1,113	1,088	..	..	2,201
STATE RAILWAYS.						
New South Wales ..	2	6,126	..	..	..	6,128
Victoria	4,634	..	..	114	..	4,748
Queensland ..	..	69	6,467	..	30	6,566
South Australia ..	1,480	..	1,067	..	..	2,547
Western Australia ..	..	..	4,381	..	..	4,381
Tasmania	..	..	642	..	..	642
Total ..	6,116	6,195	12,557	114	30	25,012
PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.						
New South Wales ..	..	17	37	..	..	54
Victoria	13	..	..	..	..	13
Queensland ..	..	..	50	..	86	136
South Australia ..	..	..	51	..	..	51
Western Australia ..	..	..	277	..	..	277
Tasmania	..	..	110	..	7	117
Total ..	13	17	525	..	93	648
ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.						
New South Wales ..	2	6,143	37	..	..	6,182
Victoria	4,647	..	..	114	..	4,761
Queensland ..	..	69	6,517	..	116	6,702
South Australia ..	1,480	654	1,716	..	..	3,850
Western Australia ..	..	454	4,658	..	..	5,112
Tasmania	..	..	752	..	7	759
Northern Territory ..	..	..	490	..	..	490
Aust. Cap. Territory	..	5	..	..	..	5
GRAND TOTAL	6,129	7,325	14,170	114	123	27,861

9. **Summary of Operations, 1945–46.**—In the following table a summary is given of the working of all railways open for general traffic in Australia during the year ended 30th June, 1946. In order to provide more accurate averages the basis of compilation has been altered as from 1941–42 in respect of the following items :—Capital cost per mile open, gross revenue, working expenses and net revenue per train mile run (private railways only), and average earnings of employees. The comparison with figures published for years earlier than 1941–42 is thereby impaired :—

GOVERNMENT AND PRIVATE RAILWAYS : SUMMARY OF OPERATIONS, 1945–46.

Particulars.		Commonwealth Railways.	State Railways.	Private Railways.(*a*)	Total for Australia.
Mileage open (route) 30th June, 1946	miles	2,201	25,012	648	27,861
Capital cost	£'000	18,091	311,877	5,138	335,106
Cost per mile	£	8,219	12,469	7,929	12,028
Gross revenue	£'000	1,566	68,610	739	70,915
,, ,, per train-mile ..	d.	206.70	194.09	185.30	194.05
Working expenses	£'000	1,502	58,233	584	60,319
,, ,, per train-mile	d.	198.35	164.74	146.60	165.06
Net revenue	£'000	63	10,377	155	10,595
,, ,, per train-mile ..	d.	8.35	29.35	38.70	28.99
Train-miles run ..	miles '000	1,818	84,838	1,050	87,706
Passenger-journeys	No. '000	347	545,409	1,461	547,217
Tons of goods, etc., carried ..	tons '000	276	36,450	2,354	39,080
Average number of employees	No.	(*b*) 2,781	(*b*) 125,039	(*c*) 1,294	129,114
,, earnings per employee	£	367	343	329	344

(*a*) Incomplete. Full particulars not available for all items. (*b*) Excludes construction staff (*c*) Employees at 31st December, 1945.

Details shown above relating to capital cost do not include particulars of amounts totalling about £61.5 million, written off during the period 1st July, 1927 to 1st July, 1937. If these are taken into account, the cost per mile for State Railways is increased to £14,928 and for all railways to £14,234.

§ 2. Government Railways.

1. **Cost of Construction and Equipment.**—The following table gives particulars of the mileage open and the capital cost of Government railways in Australia. The cost shown for Australia (£329,968,000) does not represent the total expenditure on construction and equipment, as legislation has been introduced in Victoria, Queensland, South Australia and Tasmania, for the purpose of reducing the capital indebtedness of the railways. Figures relating to capital cost do not include charges for works in the course of construction, surveys, and discounts and flotation charges on loans allocated to the railways.

GOVERNMENT RAILWAYS : MILEAGE AND COST TO 30th JUNE, 1946.

System.	Mileage Open.		Total Cost of Construction and Equipment.	Average Cost per Route-Mile Open.	Cost per Head of Population.	Route Mileage per 1,000 of Population.
	Route.	Track.				
	Miles.	Miles.	£'000.	£	£	Miles.
New South Wales	6,128	8,368	154,976	25,290	52.62	2.08
Victoria (*a*) ..	4,748	6,119	53,299	11,225	26.31	2.34
Queensland (*a*) ..	6,566	7,449	40,689	6,197	37.35	6.03
South Australia (*a*)	2,547	3,139	30,647	12,032	48.27	4.01
Western Australia	4,381	4,840	26,752	6,106	54.30	8.89
Tasmania (*a*) ..	642	694	3,068	4,779	12.17	2.55
Commonwealth ..	2,201	2,361	18,090	8,219	..	..
Australia (*a*) ..	27,213	32,970	(*b*)329,968	12,125	44.19	3.64

(*a*) See following paragraph. (*b*) Includes Commonwealth proportion Grafton-South Brisbane Line, £2,446,972.

The reductions made in the capital indebtedness referred to above were :—Victoria, £25,684,423 ; Queensland, £28,000,000 ; South Australia, £3,088,986 ; and Tasmania, £4,738,000. After adding these figures to the capital costs of the respective States and adjusting the route-mileage for New South Wales and Queensland to exclude portions of the Grafton-South Brisbane Line, the cost per route-mile open in each State and for the Commonwealth railways is as follows :—New South Wales, £25,290 ; Victoria, £16,635 ; Queensland, £10,572 ; South Australia, £13,245 ; Western Australia, £6,106 ; Tasmania, £12,159 ; Commonwealth, £8,219 ; and for all Government railways in Australia, £14,422. The lowest average cost is in Western Australia, and the highest is in New South Wales. Very few engineering difficulties were encountered in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contract considerably reduced expenditure.

Adjusted figures for the cost per head of population for each State and for Australia are as follows :—New South Wales, £52.62 ; Victoria, £38.99 ; Queensland, £63.05 ; South Australia, £53.13 ; Western Australia, £54.30 ; Tasmania, £30.98 ; all Government railways in Australia, £52.43.

2. **Expenditure on Construction and Equipment from Revenue and from Loans.**—The following table gives particulars of the expenditure on construction and equipment from revenue and from loans :—

GOVERNMENT RAILWAYS : CAPITAL EXPENDITURE FROM REVENUE AND FROM LOANS.

System.	Expenditure from Revenue to 30th June, 1946.	Net Loan Expenditure.			
		1938–39.	1944–45.	1945–46.	Total to 30th June, 1946.
	£'000.	£'000.	£'000.	£'000.	£'000.
New South Wales ..	666,864	2,002	1,186	2,275	162,124
Victoria	*a* 6,202,710	(*b*) 354	(*b*) 496	(*b*) 389	(*b*) 80,149
Queensland.. ..	..	490	472	251	67,536
South Australia ..	..	261	409	308	36,970
Western Australia ..	631,715	(*c*) 195	69	70	25,867
Tasmania	..	35	143	90	(*d*) 8,008
Commonwealth ..	3,203,685	..	*Cr.* 41	*Cr.* 7	11,321
Australia ..	10,704,974	3,337	2,734	3,376	(*e*) 394,422

(*a*) From proceeds of sale of State lands, Consolidated Revenue Fund, National Recovery Loan, etc. (*b*) Gross Loan Expenditure. (*c*) Includes expenditure on railways provided in Unemployment Relief work programmes. (*d*) Includes losses funded. (*e*) Includes £2,446,972 Commonwealth Loan Expenditure on Grafton–South Brisbane Line.

3. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked and the revenue per train-mile run during the years 1942–43 to 1945–46 in comparison with 1938–39 were as follows :—

GOVERNMENT RAILWAYS : GROSS REVENUE.

Year.	N.S.W.(*a*)	Vic.(*b*)	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
TOTAL GROSS REVENUE.								
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	19,946	9,284	7,798	3,119	3,599	487	547	44,780
1942–43 ..	34,872	17,030	18,027	5,810	4,418	842	3,747	84,746
1943–44 ..	35,301	15,882	16,430	5,979	4,387	871	3,459	82,309
1944–45 ..	32,377	15,259	13,809	5,460	4,276	900	2,424	74,505
1945–46 ..	32,113	14,675	11,917	4,871	4,107	928	1,565	70,176

(*a*) Includes £800,000 per annum contribution from consolidated revenue towards losses on working of country developmental lines. (*b*) Includes the following recoups by the Treasury—1938–39, £10,000 guarantee in respect of losses on certain lines ; and in 1942–43, 1943–44, 1944–45 and 1945–46 £357,000, £279,500, £285,300 and £121,500, respectively, being recoups of losses resulting from reduction in suburban fares and Defence Force fare concessions.

GOVERNMENT RAILWAYS : GROSS REVENUE—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
GROSS REVENUE PER AVERAGE MILE WORKED.								
	£	£	£	£	£	£	£	£
1938–39 ..	3,263	1,953	1,188	1,220	822	740	248	1,645
1942–43 ..	5,691	3,580	2,745	2,280	1,008	1,313	1,702	3,113
1943–44 ..	5,761	3,345	2,502	2,348	1,001	1,357	1,572	3,025
1944–45 ..	5,283	3,214	2,103	2,143	976	1,402	1,101	2,738
1945–46 ..	5,241	3,091	1,815	1,912	937	1,445	711	2,579
GROSS REVENUE PER TRAIN-MILE RUN.								
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1938–39 ..	159.01	124.54	134.38	121.19	131.38	61.30	145.42	138.70
1942–43 ..	214.60	221.69	217.95	205.32	167.24	91.21	258.88	211.62
1943–44 ..	228.36	232.23	199.21	211.75	174.20	95.66	240.46	215.27
1944–45 ..	199.76	224.15	188.59	197.99	166.30	98.13	239.83	198.18
1945–46 ..	202.81	215.49	183.25	183.99	156.33	99.84	206.70	194.35

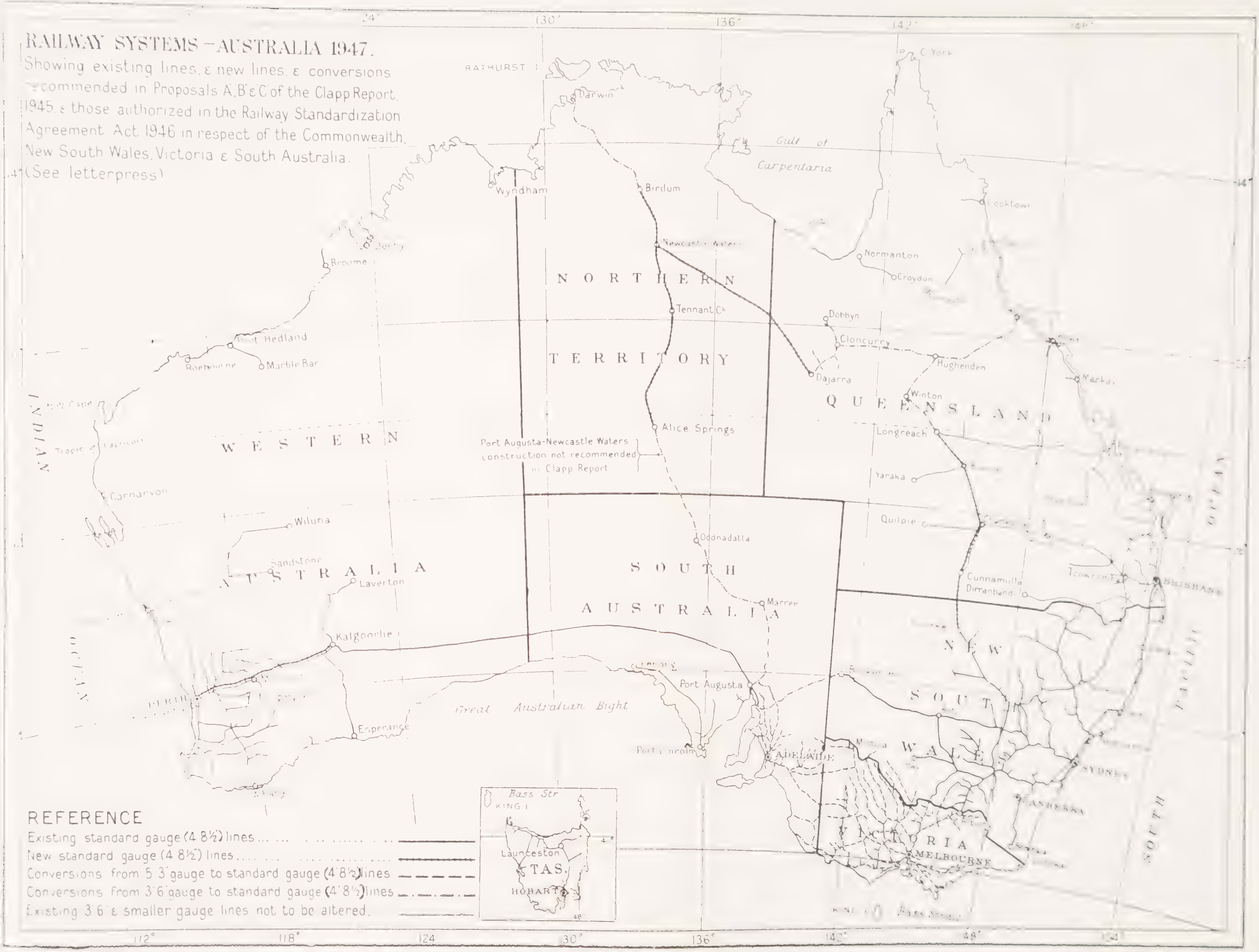
(ii) *Coaching, Goods and Miscellaneous Receipts.*—(*a*) *Totals.* The gross revenue is composed of (*a*) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains ; (*b*) receipts from the carriage of goods and live stock ; and (*c*) rents and miscellaneous items. The following table shows the gross revenue for 1938–39 and 1942–43 to 1945–46 classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

GOVERNMENT RAILWAYS : COACHING, GOODS AND MISCELLANEOUS RECEIPTS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000	£'000.
COACHING TRAFFIC RECEIPTS.								
1938–39 ..	6,877	4,286	2,057	754	704	152	194	15,024
1942–43 ..	12,766	7,647	4,674	1,703	1,360	314	961	29,425
1943–44 ..	12,867	7,174	4,861	1,671	1,426	310	940	29,249
1944–45 ..	12,305	7,171	4,332	1,646	1,375	320	(*c*) 797	*c* 27,946
1945–46 ..	13,362	7,413	4,145	1,574	1,324	334	656	28,808
GOODS AND LIVE STOCK TRAFFIC RECEIPTS.								
1938–39 ..	10,356	4,276	5,474	2,144	2,807	318	224	25,599
1942–43 ..	18,240	8,141	12,732	3,649	2,881	490	2,712	48,845
1943–44 ..	18,408	7,485	10,842	3,720	2,789	516	2,434	46,194
1944–45 ..	16,138	6,863	8,823	3,382	2,759	528	(*c*) 1,047	*c* 39,540
1945–46 ..	14,739	6,058	7,226	2,889	2,674	563	803	34,952
MISCELLANEOUS RECEIPTS.								
	(*a*)	(*b*)						
1938–39 ..	2,713	722	266	222	88	17	129	4,157
1942–43 ..	3,866	1,242	621	458	177	38	74	6,476
1943–44 ..	4,026	1,223	727	588	172	45	85	6,866
1944–45 ..	3,934	1,225	654	432	142	52	(*c*) 79	(*c*)6,518
1945–46 ..	4,012	1,204	546	408	109	31	106	6,416

(*a*) See note (*a*) to Gross Revenue table above. (*b*) See note (*b*) to Gross Revenue table above.

(*c*) Excludes particulars of North Australia Commonwealth Railway.

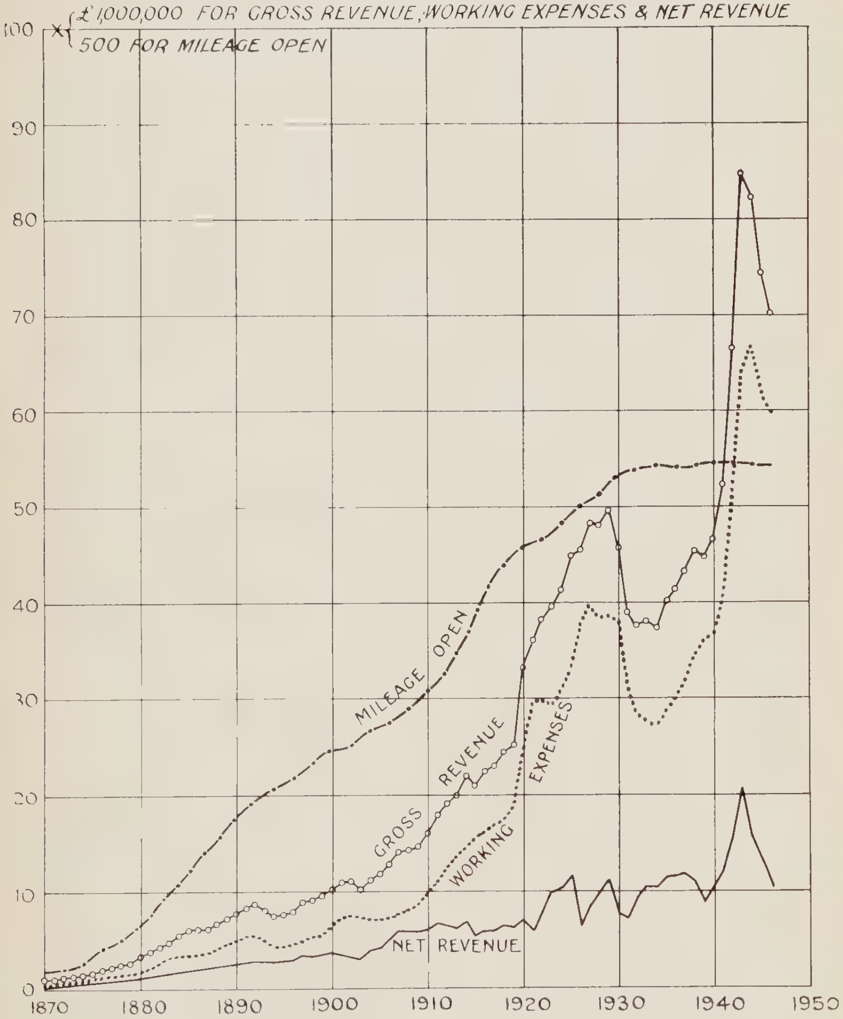


RAILWAY SYSTEMS – AUSTRALIA 1947.
Showing existing lines, & new lines, & conversions recommended in Proposals A, B & C of the Clapp Report, 1945, & those authorized in the Railway Standardization Agreement Act 1946 in respect of the Commonwealth, New South Wales, Victoria & South Australia.
(See letterpress)

REFERENCE
Existing standard gauge (4′ 8½″) lines
New standard gauge (4′ 8½″) lines
Conversions from 5′ 3″ gauge to standard gauge (4′ 8½″) lines
Conversions from 3′ 6″ gauge to standard gauge (4′ 8½″) lines
Existing 3′ 6″ & smaller gauge lines not to be altered.

124°
130°
136°
142°
148°
112°
118°
BATHURST I.
C. York
Darwin
Gulf of Carpentaria
Wyndham
Birdum
Cooktown
Newcastle Waters
Normanton
Croydon
Broome
NORTHERN TERRITORY
Tennant Ck.
Dobbyn
Cloncurry
Hughenden
Port Hedland
Roebourne
Marble Bar
Dajarra
Mackay
Winton
QUEENSLAND
INDIAN OCEAN
Tropic of Capricorn
WESTERN AUSTRALIA
Alice Springs
Longreach
Port Augusta-Newcastle Waters construction not recommended in Clapp Report
Yaraka
Carnarvon
Quilpie
Wiluna
Oodnadatta
Sandstone
Laverton
SOUTH AUSTRALIA
Cunnamulla
Dirranbandi
BRISBANE
Marree
Kalgoorlie
NEW SOUTH WALES
PERTH
Port Augusta
Great Australian Bight
Esperance
Port Lincoln
ADELAIDE
SYDNEY
CANBERRA
VICTORIA
MELBOURNE
SOUTH PACIFIC OCEAN
Bass Str.
KING I.
Launceston
TAS.
HOBART
Bass Strait

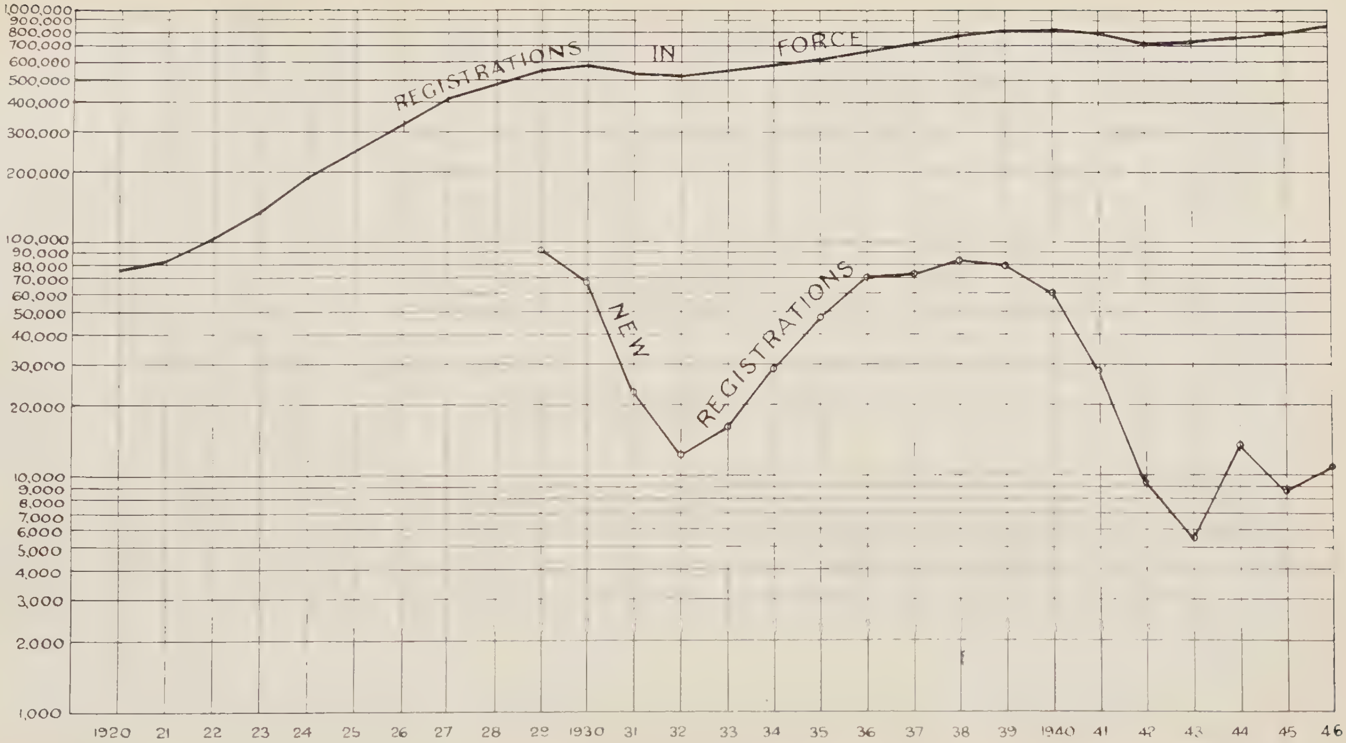
FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1946.



EXPLANATION.—The base of each square represents throughout ten years. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curves for (i) gross revenue; (ii) working expenses; and (iii) net revenue, the vertical side of each square represents £10,000,000. The mileage open is shown by a broken line, the vertical side of each square representing 5,000 miles.

MOTOR VEHICLE REGISTRATION—AUSTRALIA, 1920 TO 1946.



(See page 175.)

EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic, and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

The graphs show for all motor vehicles other than motor cycles the registrations in force at 30th June each year and the number of new registrations during the year.

(*b*) *Percentages.* The following table shows for each of the years 1944–45 and 1945–46 the percentage which each class of receipts bears to the total gross revenue :—

GOVERNMENT RAILWAYS : PERCENTAGES OF RECEIPTS.

System.	1944–45.			1945–46.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	38.01	49.84	12.15	41.61	45.90	12.49
Victoria	47.00	44.98	8.02	50.51	41.29	8.20
Queensland.. ..	31.37	63.89	4.74	34.78	60.64	4.58
South Australia ..	30.15	61.95	7.90	32.31	59.31	8.38
Western Australia ..	32.15	64.53	3.32	32.24	65.11	2.65
Tasmania	35.51	58.65	5.84	35.97	60.66	3.37
Commonwealth ..	(*a*) 41.46	(*a*) 54.43	(*a*) 4.11	41.96	51.27	6.77
Australia ..	(*a*) 37.76	(*a*) 53.43	(*a*) 8.81	41.05	49.81	9.14

(*a*) Excludes particulars of North Australia Commonwealth Railways.

4. **Working Expenses.**—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same systems. When traffic is light, the percentage of working expenses is naturally greater than when traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

During the war years large amounts were set aside by the Railways as reserves, mainly to provide for depreciation and accrued leave, to be expended as circumstances permit. War conditions subjected the Railways to heavy demands, and shortages in man-power and materials rendered it impossible to deal with the resulting rapid deterioration of stock, tracks and works. Leave accrued because shortages in staff prevented the taking of annual leave. The railway authorities therefore took the opportunity, which increased revenues offered, to provide for these future commitments. Particulars of the amounts thus set aside by each State during the years 1940–41 to 1944–45 are shown in the following table. These amounts are included in the maintenance of Way and Works and Rolling Stock sections following.

GOVERNMENT RAILWAYS : RESERVES MAINLY FOR DEPRECIATION AND ACCRUED LEAVE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1940–41 ..	1,215	625	125	25	..	100	..	2,090
1941–42 ..	2,403	1,651	710	170	12	100	150	5,196
1942–43 ..	5,214	2,485	1,707	81	80	90	100	9,757
1943–44 ..	3,509	1,272	2,279	112	96	112	100	7,480
1944–45 ..	1,129	919	465	108	36	152	..	2,809

The following table shows the total annual expenditure, the percentage thereof on gross revenue, and the expenditure per average mile worked and per train-mile run for the years 1942–43 to 1945–46 in comparison with 1938–39 :—

GOVERNMENT RAILWAYS : WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
TOTAL WORKING EXPENSES.								
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	14,543	8,060	6,193	2,931	2,911	678	642	35,958
1942–43 ..	27,343	14,040	11,400	4,661	3,448	964	2,171	64,027
1943–44 ..	27,535	13,214	13,163	5,213	3,796	1,136	2,521	66,578
1944–45 ..	24,673	12,833	11,675	5,146	3,764	1,167	2,113	61,371
1945–46 ..	24,934	12,531	10,425	5,107	4,027	1,209	1,502	59,735

GOVERNMENT RAILWAYS: WORKING EXPENSES—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
				PERCENTAGE ON GROSS REVENUE.				
	%	%	%	%	%	%	%	%
1938–39 ..	72.91	86.82	79.42	93.97	80.90	139.18	117.43	80.30
1942–43 ..	78.41	82.44	63.24	80.21	78.03	114.45	57.95	75.55
1943–44 ..	78.00	83.20	80.12	87.18	86.54	130.46	72.87	80.89
1944–45 ..	76.21	84.10	84.55	94.24	88.03	129.65	87.16	82.36
1945–46 ..	77.64	85.39	87.49	104.86	98.05	130.34	95.96	85.12
				PER AVERAGE MILE WORKED.				
	£	£	£	£	£	£	£	£
1938–39 ..	2,378	1,695	943	1,146	665	1,030	292	1,321
1942–43 ..	4,462	2,951	1,736	1,829	787	1,502	986	2,352
1943–44 ..	4,493	2,783	2,005	2,047	866	1,770	1,145	2,447
1944–45 ..	4,026	2,703	1,778	2,020	859	1,804	960	2,255
1945–46 ..	4,069	2,639	1,588	2,005	919	1,883	682	2,195
				PER TRAIN-MILE RUN.				
	d.	d.	d.	d.	d.	d.	d.	d.
1938–39 ..	115.93	108.13	106.72	113.88	106.28	85.31	170.77	111.38
1942–43 ..	168.27	182.77	137.83	164.69	130.51	104.39	150.02	159.88
1943–44 ..	178.13	193.21	159.60	184.61	150.74	124.80	175.21	174.12
1944–45 ..	152.22	188.51	159.45	186.59	146.40	126.27	209.04	163.22
1945–46 ..	157.47	184.01	160.32	192.93	153.28	130.13	198.35	165.44

(ii) *Distribution.* The following table shows the distribution of working expenses under the chief four heads of expenditure for the years 1938–39 and 1942–43 to 1945–46 :—

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
				MAINTENANCE OF WAY AND WORKS.(*a*)				
1938–39 ..	2,972	1,374	1,602	503	667	129	245	7,492
1942–43 ..	6,700	2,833	2,634	721	679	160	602	14,329
1943–44 ..	5,948	2,623	2,930	924	761	201	746	14,133
1944–45 ..	4,697	2,395	2,414	810	709	192	640	11,857
1945–46 ..	4,732	2,467	2,131	778	736	212	438	11,494
				ROLLING STOCK.(*a*)				
1938–39 ..	5,622	2,801	2,695	1,389	1,321	373	251	14,452
1942–43 ..	11,177	5,552	5,610	2,241	1,593	527	1,179	27,879
1943–44 ..	11,360	4,927	6,639	2,513	1,769	522	1,394	29,124
1944–45 ..	10,059	4,710	5,804	2,544	1,793	533	1,161	26,604
1945–46 ..	9,478	4,533	4,974	2,519	1,932	552	800	24,788
				TRANSPORTATION AND TRAFFIC.				
1938–39 ..	3,502	2,254	1,533	682	779	151	101	9,002
1942–43 ..	5,198	2,931	2,410	1,089	833	195	345	13,001
1943–44 ..	5,598	2,960	2,742	1,180	932	205	333	13,950
1944–45 ..	5,440	3,095	2,632	1,199	935	208	258	13,767
1945–46 ..	5,926	3,044	2,504	1,217	1,008	226	193	14,118

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES —*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
				OTHER CHARGES.				
1938–39 ..	2,448	1,630	363	357	144	24	45	5,011
1942–43 ..	4,268	2,724	746	610	343	82	45	8,818
1943–44 ..	4,629	2,704	852	596	334	208	48	9,371
1944–45 ..	4,477	2,633	825	593	327	234	54	9,143
1945–46 ..	4,798	2,487	816	593	351	219	71	9,335

(*a*) See par. 4 (i).

5. **Net Revenue.**—The following table shows the net earnings, i.e., the excess of gross earnings over working expenses, and the amount of such net earnings per average mile worked and per train-mile run for the years 1942–43 to 1945–46 in comparison with 1938–39 :—

GOVERNMENT RAILWAYS: NET REVENUE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
				NET REVENUE.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	5,403	1,224	1,605	188	688	— 191	— 95	8,822
1942–43 ..	7,529	2,990	6,627	1,149	970	— 122	1,576	20,719
1943–44 ..	7,766	2,668	3,267	766	591	— 265	938	15,731
1944–45 ..	7,704	2,426	2,134	314	512	— 267	311	13,134
1945–46 ..	7,180	2,144	1,491	— 237	80	— 281	63	10,440
				NET REVENUE PER AVERAGE MILE WORKED.				
	£	£	£	£	£	£	£	£
1938–39 ..	884	257	244	74	157	— 290	— 43	324
1942–43 ..	1,229	629	1,009	451	221	— 89	716	761
1943–44 ..	1,267	562	498	301	135	— 413	426	578
1944–45 ..	1,257	511	325	123	117	— 402	141	483
1945–46 ..	1,172	452	227	— 93	18	— 438	29	384
				NET REVENUE PER TRAIN-MILE RUN.				
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1938–39 ..	43.08	16.42	27.66	7.31	25.10	—24.01	—25.35	27.33
1942–43 ..	46.33	38.92	80.12	40.63	36.73	—13.18	108.86	51.74
1943–44 ..	50.24	39.02	39.61	27.14	23.45	—29.14	65.25	41.14
1944–45 ..	47.54	35.64	29.14	11.40	19.90	—28.14	30.79	34.96
1945–46 ..	45.34	31.48	22.93	— 8.94	3.05	—30.29	8.35	28.91

In the graphs accompanying this Chapter the gross and net revenue and working expenses are shown from 1870 to 1946.

6. **Interest.**—The interest payments on expenditure from loans for the construction and equipment of the Government railways in Australia during the years 1938–39 and 1942–43 to 1945–46 were as follows :—

GOVERNMENT RAILWAYS : INTEREST PAYMENTS ON RAILWAY LOAN EXPENDITURE.

Year.	N.S.W. (a)	Victoria. (b)	Q'land. (a) (b)	S. Aust. (b)	W. Aust.	Tasmania. (b)	C'wealth.	Australia (a)
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	5,360	1,860	1,642	1,075	1,001	80	395	11,540
1942–43 ..	5,350	1,890	1,572	1,063	1,032	85	364	11,482
1943–44 ..	5,328	1,902	1,579	1,074	1,043	89	363	11,505
1944–45 ..	5,350	1,903	1,592	1,072	1,051	96	356	11,547
1945–46 ..	5,240	1,902	1,480	1,054	1,040	97	341	11,265

(a) Includes interest charges on the Grafton-South Brisbane Line, which for 1942–43 to 1944–45 amounted annually to £225,939 and were contributed by New South Wales, £72,179; Queensland, £27,029; and the Commonwealth, £126,731. During 1945–46 the annual interest charge was reduced to £198,638 and was contributed by New South Wales, £63,457; Queensland, £23,763; and the Commonwealth, £111,418. See par 5, p. 149. (b) Capital indebtedness reduced by legislation in these four States. See par. 1, p. 153.

The interest payable on the cost of construction and equipment as shown in the table in par. 1, p. 152, after the expenditure from Consolidated Revenue (£10,704,974 to June, 1946) for that purpose had been deducted, was at the rate of 3.62 per cent. in 1944–45 and 3.53 per cent. in 1945–46.

Exchange on interest payments abroad and certain other charges are not included in the table above. These items are not charged against the railways in Queensland and Western Australia and have been excluded for the purposes of comparison. In the remaining States the amounts paid on account of exchange in 1944–45 were—New South Wales, £760,000 ; Victoria, £200,026 ; South Australia, £125,714 ; and Tasmania, £6,878 ; and in 1945–46—New South Wales, £721,000 ; Victoria, £184,876 ; South Australia, £93,944 ; and Tasmania, £8,243.

7. **Profit or Loss.**—The following table shows, for the years 1938–39 and 1942–43 to 1945–46 the actual profit or loss after deducting working expenses and interest, but excluding exchange, from the gross revenue :—

GOVERNMENT RAILWAYS : PROFIT OR LOSS.

PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES AND INTEREST.

Year.	N.S.W. (a)	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia. (a)
	£'000.	£'000.	£'000.	£'000.	£'003.	£'000.	£'000.	£'000.
1938–39 ..	43	— 636	— 37	— 886	— 313	— 272	— 490	—2,718
1942–43 ..	2,179	1,100	5,055	86	— 62	— 207	1,212	9,237
1943–44 ..	2,438	766	1,689	— 308	— 452	— 354	575	4,227
1944–45 ..	2,354	524	542	— 758	— 539	— 363	— 45	1,588
1945–46 ..	1,939	242	11	— 1,291	— 960	— 378	— 277	— 825

(a) See note (a), par. 6, above.

For the first time since 1939–40 the Government railways of Australia as a whole showed a loss in 1945–46 after the payment of working expenses and interest.

8. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern

and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In more recent years competition from air transport has become an important factor.

The following table gives particulars for the years 1942–43 to 1945–46 in comparison with 1938–39 :—

GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
Number of Passenger-Journeys.								
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1938–39 ..	186,720	142,123	24,639	17,529	11,416	2,297	117	384,841
1942–43 ..	237,441	195,830	33,263	30,864	17,092	3,324	463	518,277
1943–44 ..	250,566	194,138	38,154	27,356	18,773	3,131	522	532,640
1944–45 ..	254,099	195,698	38,962	24,820	18,099	3,261	473	535,412
1945–46 ..	267,423	196,118	38,199	23,119	17,136	3,414	347	545,756
Per Average Mile of Line Worked.								
	No.	No.	No.	No.	No.	No.	No.	No.
1938–39 ..	30,541	29,896	3,752	6,854	2,608	3,490	53	14,134
1942–43 ..	38,747	41,158	5,065	12,108	3,901	5,177	210	19,037
1943–44 ..	40,889	40,888	5,811	10,741	4,285	4,877	237	19,573
1944–45 ..	41,465	41,217	5,934	9,745	4,131	5,079	215	19,675
1945–46 ..	43,639	41,305	5,818	9,077	3,911	5,318	158	20,055
Tonnage of Goods and Live Stock Carried.								
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1938–39 ..	15,417	5,976	5,234	2,640	2,859	844	186	33,156
1942–43 ..	19,646	8,759	6,706	3,430	2,505	982	473	42,501
1943–44 ..	19,403	8,294	6,567	3,648	2,560	978	516	41,966
1944–45 ..	18,793	8,064	6,240	3,476	2,904	924	381	40,782
1945–46 ..	16,885	7,229	5,758	2,970	2,728	880	276	36,726
Per Average Mile of Line Worked.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39 ..	2,522	1,257	797	1,032	653	1,282	84	1,218
1942–43 ..	3,206	1,841	959	1,346	572	1,475	215	1,546
1943–44 ..	3,166	1,747	923	1,432	584	1,523	234	1,525
1944–45 ..	3,067	1,698	950	1,365	663	1,443	173	1,499
1945–46 ..	2,755	1,523	877	1,166	623	1,375	125	1,350

(ii) *Metropolitan and Country Passenger Traffic and Revenue*, 1940–41. A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic during 1940–41 shown below. Figures for later years are not available for all States, because statistical compilations have been restricted owing to staff shortages and the extra work caused by war traffic.

GOVERNMENT RAILWAYS : METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1940–41.

System.	Passenger-Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	'000.	'000.	'000.	£'000.	£'000.	£'000.
New South Wales	180,441	13,705	194,146	3,403	4,233	7,636
Victoria ..	149,652	9,566	159,218	2,623	2,381	5,004
Queensland ..	21,055	5,139	26,194	365	1,424	1,789
South Australia ..	18,642	1,718	20,360	269	552	821
Western Australia	9,967	1,551	11,518	129	512	641
Tasmania ..	(a) 1,790	1,002	2,792	(a) 24	142	166
Commonwealth ..	..	194	194	..	296	296
Australia ..	381,547	32,875	414,422	6,813	9,540	16,353

(a) Estimated.

(iii) *Goods Traffic.* (a) *Classification.* Some indication of the differing conditions of the traffic in each system is also given by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various commodities carried during 1945–46.

GOVERNMENT RAILWAYS : CLASSIFICATION OF COMMODITIES CARRIED, 1945–46.
'000 TONS CARRIED.

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live Stock.	All other Commodities.	Total.
New South Wales ..	(a)	(a)	(a)	(a)	1,013	15,872	16,885
Victoria	(a)	(a)	(a)	(a)	620	6,609	7,229
Queensland ..	965	376	..	82	605	3,730	5,758
South Australia ..	312	470	359	30	183	1,616	2,970
Western Australia..	308	278	750	37	138	1,217	2,728
Tasmania ..	88	103	(a)	8	35	646	880
Commonwealth ..	73	3	(a)	2	56	142	276
Australia ..	(b)	(b)	(b)	(b)	2,650	29,832	36,726

(a) Included with " All other Commodities ". (b) Not available.

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1945–46 :—

GOVERNMENT RAILWAYS : REVENUE FROM GOODS AND LIVE STOCK, 1945–46.

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
General merchandise	(a)	5,439	3,750	1,740	2,024	434	666	(a)
Wool ..		(b)	552	65	97	12	6	
Live Stock..		519	835	219	182	34	105	
Minerals—								
Coal and coke ..		(b)	431	101	174	(e)	21	
Other ..		(b)	264	510	110	83	3	
Miscellaneous		100	(c) 1,394	(d) 254	87	..	2	
Total ..	14,739	6,058	7,226	2,889	2,674	563	803	34,952

(a) Not available. (b) Included with " General Merchandise " (c) Includes agricultural produce, £1,370,000. (d) Includes wheat, £199,000. (e) Included with " Other Minerals ".

(iv) *Passenger-Mileage and Ton-Mileage.* Particulars of passenger-mileage and ton-mileage in respect of the Government railways in Australia for the years 1938–39 to 1941–42 are given on pages 147–8 of Official Year Book No. 36. Figures for later years are not available for all States owing to the restriction of statistical compilations necessitated by staff shortages and extra work caused by war traffic.

9. **Rolling Stock.**—The following table shows the number of rolling stock in use at 30th June for each of the years 1939, 1945 and 1946. Further details may be found in *Transport and Communication Bulletins.*

GOVERNMENT RAILWAYS : ROLLING STOCK.

System.	30th June—								
	1939.			1945.			1946.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
New South Wales ..	1,284	2,808	24,257	1,148	2,827	25,483	1,151	2,816	25,715
Victoria	581	2,439	20,993	593	2,434	20,654	596	2,473	20,829
Queensland ..	752	1,413	18,733	782	1,452	20,848	774	1,446	20,807
South Australia ..	335	594	7,966	328	643	7,993	328	649	8,024
Western Australia ..	427	475	11,110	414	427	10,950	424	426	11,055
Tasmania	95	225	2,120	104	223	2,422	108	217	2,383
Commonwealth ..	113	89	1,359	168	125	2,056	168	124	2,079
Australia ..	3,587	8,043	86,538	3,537	8,131	90,406	3,549	8,151	90,892

10. **Accidents.**—The following table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways of Australia for each of the years 1943–44 to 1945–46 :—

GOVERNMENT RAILWAYS : ACCIDENTS.

System.	1943–44.		1944–45.		1945–46.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales (*a*) ..	141	813	141	797	106	721
Victoria	35	242	47	510	42	415
Queensland	32	326	27	300	20	293
South Australia	20	311	10	321	12	218
Western Australia	13	197	27	173	22	195
Tasmania	3	7	3	6	4	5
Commonwealth	5	159	4	168	..	212
Australia	249	2,055	259	2,275	206	2,059

(*a*) Excludes accidents to railway employees.

11. **Consumption of Oil and Coal.**—The following table shows the quantities and values of oil and coal consumed by the various Government Railway Departments during 1945–46 :—

GOVERNMENT RAILWAYS : OIL AND COAL CONSUMED, 1945–46.

System.	Oil.				Coal.			
	Lubrication.		Fuel, Light, etc.		Locomotives.		Other Purposes.	
	Gallons. '000.	£'000.	Gallons. '000.	£'000.	Tons. '000.	£'000.	Tons. '000.	£'000.
N.S.W. ..	(*a*)	(*a*)	(*a*)	(*a*)	1,322	1,372	717	958
Victoria ..	202	39	1,785	84	381	728	144	249
Q'land. ..	317	67	562	41	576	654	42	49
S. Aust. ..	116	21	1,222	84	291	649	7	13
W. Aust...	104	23	472	29	343	465	6	7
Tas. ..	45	10	363	20	69	100	1	1
C'wealth ..	49	10	274	17	71	215	1	4
Australia	(*a*)	(*a*)	(*a*)	(*a*)	3,053	4,183	918	1,281

(*a*) Not available.

12. **Staff Employed.**—(i) *Numbers.* The following table gives details of the average staff employed by the Government railways of Australia during 1945–46 :—

GOVERNMENT RAILWAYS : AVERAGE STAFF EMPLOYED(*a*), 1945–46.

System.	Operating Staff.		Construction Staff.		Total Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
	No.	No.	No.	No.	No.	No.
New South Wales ..	8,428	44,824	4	1,155	8,432	45,979
Victoria	3,236	23,571	(*b*)	(*b*)	3,236	23,571
Queensland.. ..	3,672	18,909	..	..	3,672	18,909
South Australia ..	1,849	9,126	(*c*)	(*c*)	1,849	9,126
Western Australia ..	1,467	7,634	..	..	1,467	7,634
Tasmania	237	2,086	..	101	237	2,187
Commonwealth ..	295	2,486	..	37	295	2,523
Australia ..	19,184	108,636	4	1,293	19,188	109,929

(*a*) Excludes members of staff serving with Defence Services. (*b*) In Victoria, railway construction work is not under the control of the Railways Commissioners. (*c*) Staff engaged on special work.

(ii) *Salaries and Wages Paid.* The following table gives details of the salaries and wages paid by the Government railways of Australia during 1945–46 :—

GOVERNMENT RAILWAYS : SALARIES AND WAGES PAID, 1945–46.

System.	Total Salaries and Wages Paid.	Average Earnings per Employee.
	£'000.	£
New South Wales	18,825	346
Victoria	9,062	338
Queensland	8,292	367
South Australia	3,619	330
Western Australia	2,928	322
Tasmania	778	321
Commonwealth	1,032	367
Australia	44,536	345

§ 3. Private Railways.

1. **Total Mileage Open, 1945–46.**—The bulk of the private railways in Australia has been laid down for the purpose of hauling timber, firewood, sugar-cane, coal and other minerals, and it is not generally used for the conveyance of passengers or for public goods traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to in this section include only lines open to the public for general passenger and goods traffic. Complete particulars of lines used for special purposes only are not available.

2. **Lines Open for General Traffic.**—The following statement gives a summary of the operations of private railways open for general traffic for 1945–46 :—

PRIVATE RAILWAYS : SUMMARY OF OPERATIONS, 1945–46.

State.	Route-Miles Open.	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles Run.	Passenger-Journeys.	Goods, etc., Carried.	Employees.
	Miles.	£'000.	£'000.	£'000.	'000.	'000.	'000 tons.	No.
N.S.W.(*a*)	54	1,256	320	253	460	1,277	679	414
Vic. ..	13	44	10	9	12	10	21	17
Q'land(*a*)..	136	85	22	22	56	..	136	25
S.A.(*a*) ..	51	524	(*b*)	(*b*)	72	74	1,196	163
W.A. ..	277	2,294	209	134	260	58	127	357
Tas.(*a*) ..	117	935	178	166	190	42	195	318
Australia(*a*)	648	5,138	739	584	1,050	1,461	2,354	1,294

(*a*) Incomplete. (*b*) Not available.

Some of the particulars given in the table are incomplete in respect of New South Wales, Queensland, South Australia and Tasmania. In New South Wales and Queensland several lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon, while some of the companies are not able to supply particulars of the capital cost, revenue and working expenses of the lines which they operate. In some cases the figures relating to tonnage of goods, etc., include particulars of coal, ores, timber, sugar-cane, etc., carried for private purposes, as details relating to goods carried for the general public are not recorded separately.

C. TRAMWAYS.

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the capital cities and in a number of the larger towns of Australia. The systems are operated mainly by governmental and municipal authorities, and from 1941–42 have been all electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways (see above), and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show for each State the total mileage of tramway lines open for general passenger traffic for 1945–46 classified (*a*) according to the controlling authority ; (*b*) according to gauge :—

TRAMWAYS : ROUTE MILEAGE OPEN, 1945–46.

Particulars—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
ACCORDING TO CONTROLLING AUTHORITY.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Government ..	172	172	..	..	50	..	394
Municipal ..	..	..	63	96	10	34	203
Private	..	..	..	..	9	..	9
Total ..	172	172	63	96	69	34	606
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5	..	..	..	..	5
4 ft. 8½ in. ..	172	167	63	96	..	..	498
3 ft. 6 in. ..	..	..	..	..	69	34	103
Total ..	172	172	63	96	69	34	606

2. **Summary of Operations, Australia.**—The following table gives a summary of the working of all electric tramway systems in Australia for the years 1941–42 to 1945–46 :—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS, AUSTRALIA.

Particulars.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Mileage open for traffic .. miles	587	591	602	603	606
Cost of construction and equipment £'000	26,289	26,533	26,888	27,156	27,428
Cost per mile .. .. £	44,785	44,895	44,664	45,034	45,261
Gross revenue .. .. £'000	9,370	10,507	11,238	11,265	11,313
Working expenses .. ,,	6,916	7,746	8,372	8,420	8,858
Net earnings .. .. ,,	2,454	2,761	2,866	2,845	2,455
Interest.. .. .. ,,	856	837	827	790	724
Percentage of working expenses on gross revenue .. .. %	73.80	73.73	74.50	74.74	78.29
Percentage of net earnings on capital cost .. .. .. %	9.33	10.41	10.66	10.48	8.95
Car-miles run .. '000 miles	81,778	85,441	87,157	87,756	88,878
Gross revenue per tram-mile d.	27.49	29.51	30.94	30.81	30.55
Working expenses per tram-mile ,,	20.29	21.76	23.05	23.03	23.92
Net earnings per tram-mile ,,	7.20	7.75	7.89	7.78	6.63
Passenger-journeys .. '000	873,657	990,482	1,083,212	1,069,716*a*	1,049,254
,, ,, per car-mile No.	10.68	11.89	12.43	12.19	11.81
Average revenue per passenger-journey d.	2.57	2.55	2.49	2.53	2.59
Persons employed at end of year No.	18,167	18,906	19,051	20,149	20,938

(*a*) Excludes passengers crossing Sydney Harbour Bridge whose journeys did not extend beyond Bridge Section.

3. **Traffic and Accidents.**—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock are shown in the following table for each State during 1945–46, and for Australia during the last five years :—

ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS.

State.	Average Mileage Open for Year.		Car-Miles Run.	Passenger-Journeys.	Average Number Passengers per Car-Mile.	Accidents. Persons—	
	Route.	Track.				Killed.	Injured.
STATES, 1945–46.							
	Miles.	Miles.	'000.	'000.	No.	No.	No.
New South Wales	172	323	*a* 36,200	*b* 417,344	11.53	45	4,426
Victoria ..	172	317	25,103	306,659	12.22	19	807
Queensland ..	63	112	10,107	147,007	14.54	9	560
South Australia ..	96	149	9,518	84,970	8.93	9	147
Western Australia	69	108	5,321	59,805	11.24	11	301
Tasmania ..	34	47	2,629	33,469	12.73	4	56
Australia ..	606	1,056	88,878	1,049,254	11.81	97	6,297
AUSTRALIA, 1941–42 TO 1945–46.							
1941–42	587	1,008	81,778	873,657	10.68	114	3,605
1942–43	591	1,015	85,441	990,482	11.89	(*c*) 135	(*c*)6,194
1943–44	602	1,033	87,157	1,083,212	12.43	(*c*) 121	(*c*)5,031
1944–45	603	1,036	87,756	1,069,716*b*	12.19	100	5,367
1945–46	606	1,056	88,878	1,049,254*b*	11.81	97	6,297

(*a*) Estimated. (*b*) *See* note (*a*) above. (*c*) Excludes particulars for Perth.

4. **State Details.**—(i) *New South Wales.* The electric tramways of Sydney and Newcastle are the property of the Government, and are under the control of the Department of Road Transport and Tramways. In Sydney and suburbs, at the 30th June, 1946, the Government tramways were divided into four distinct systems operated by electricity, and one, the Kogarah–Rockdale–Sans Souci line, by trolley bus (6 miles 32 chains). In addition, 2 miles 18 chains of trolley bus route operated in the city and suburban system. The gauge of all lines is 4 ft. 8½ in.

(ii) *Victoria.* In Melbourne, electric tramway systems with route mileages of 131 miles 29 chains are worked by the Melbourne and Metropolitan Tramways Board, while two electric tramways, (*a*) St. Kilda to Brighton 5 miles 14 chains and (*b*) Sandringham to Black Rock 2 miles 34 chains, belong to and are operated by the Railways Commissioners. The State Electricity Commission operates 11 miles 2 chains of electric tramways at Geelong, 13 miles 67 chains at Ballarat and 8 miles 51 chains at Bendigo.

A short account of the formation of the Melbourne Tramway and Omnibus Company and of the Tramways Board will be found in earlier issues of this work (see Year Books No. 7, page 652, No. 9, page 679, and No. 15, page 593).

With the exception of the St. Kilda-Brighton line, which is of 5 ft. 3 in. gauge, all the tramways of the State are of 4 ft. 8½ in. gauge.

(iii) *Queensland.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the Brisbane Tramways Trust Act 1922, appointed a Trust to control and operate the system until 1st December, 1925, when the control passed to the Brisbane City Council. The total length of the Brisbane tramways was 63 route miles at 30th June, 1946, the gauge of the line being 4 ft. 8½ in.

(iv) *South Australia.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Electric traction was inaugurated in 1909, and at the 31st January, 1947, the Tramways Trust operated a total route mileage of 80 miles of 4 ft. 8½ in. gauge. Over 16 miles of trolley bus route were included in the total route mileage operated (96 miles).

(v) *Western Australia.* The Perth electric tramways were taken over by the Government on the 1st July, 1913, and are now worked in conjunction with the Government railways. The length of route open at 30th June, 1946, was 50 miles. Trolley bus route miles included in this total amounted to 14. Electric tramways with a route mileage at 31st August, 1946, of 10½ miles and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, of which, at the end of 1946, the length of line was 9·40 route miles. All the electric tramways of the State are of 3 ft. 6 in. gauge.

(vi) *Tasmania.* In Hobart there is a system of electric tramways consisting of 14 route miles of 3 ft. 6 in. gauge and 6 miles of trolley bus route controlled by the Hobart Municipal Council. The Launceston City Council operates a length of 14 miles of 3 ft. 6 in. gauge in that city.

(vii) *Summary of Operations.* The following table gives particulars of the working of electric tramways in each State of Australia for the years 1942–43 to 1945–46 in comparison with the year 1938–39 :—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Car Miles.	Passengers carried.	Persons employed at end of year.
		£'000.	£'000.	£'000.	£'000.	£'000.	%	'000.	'000.	
					NEW SOUTH WALES.					
1939	182	8,944	3,449	3,080	369	310	89.30	34,941	322,238	8,062
1943	164	8,566	4,114	3,554	560	267	86.39	34,000	403,390	9,383
1944	172	8,712	4,302	3,913	389	258	90.96	34,000	436,048	9,285
1945	172	8,715	4,320	3,874	446	259	89.68	35,500	*a* 424,225	9,251
1946	172	8,727	4,370	4,128	242	232	94.47	36,200	*a* 417,344	9,320
					VICTORIA.					
1939	166	8,086	2,112	1,388	724	254	65.72	22,803	175,198	4,355
1943	171	8,636	3,253	1,928	1,325	205	59.27	25,323	291,222	4,575
1944	171	8,760	3,403	2,001	1,402	202	58.80	25,451	304,404	4,470
1945	172	8,744	3,476	2,036	1,440	185	58.57	25,172	310,052	4,826
1946	172	8,897	3,495	2,126	1,369	180	60.81	25,103	306,659	5,305
					QUEENSLAND.					
1939	60	2,391	831	632	199	120	76.05	8,100	91,444	1,911
1943	63	2,397	1,249	824	425	131	65.97	9,467	135,480	1,856
1944	63	2,350	1,455	896	559	132	61.58	10,017	157,432	1,929
1945	63	2,327	1,462	956	506	101	65.39	10,327	159,679	2,314
1946	63	2,358	1,356	985	371	90	72.64	10,107	147,007	2,383

(*a*) *See* note (*a*) to table in para. 2 above.

ELECTRIC TRAMWAYS: SUMMARY OF OPERATIONS—*continued.*

SOUTH AUSTRALIA.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. £'000.	Gross Revenue. £'000.	Working Expenses £'000.	Net Earnings. £'000.	Interest. £'000.	Percentage of Working Expenses on Gross Revenue. %	Car Miles. '000.	Passengers carried. '000.	Persons employed at end of year.
1939	78	4,438	711	494	217	154	69.48	8,712	52,906	(b) 1,750
1943	94	4,371	1,069	776	293	157	72.59	8,506	79,406	1,741
1944	96	4,477	1,190	877	313	158	73.70	9,065	88,889	1,959
1945	96	4,759	1,144	884	260	156	77.27	8,719	84,243	2,290
1946	96	4,812	1,199	934	265	158	77.87	9,518	84,970	2,331

WESTERN AUSTRALIA.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. £'000.	Gross Revenue. £'000.	Working Expenses £'000.	Net Earnings. £'000.	Interest. £'000.	Percentage of Working Expenses on Gross Revenue. %	Car Miles. '000.	Passengers carried. '000.	Persons employed at end of year.
1939	71	1,752	367	342	25	44	93.19	4,756	38,095	792
1943	70	1,869	562	466	96	48	82.92	5,682	57,732	950
1944	69	1,878	615	515	100	48	83.74	6,087	65,269	998
1945	69	1,863	573	480	93	48	83.77	5,432	59,788	1,010
1946	69	1,867	583	513	70	48	87.93	5,321	59,805	1,100

TASMANIA.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. £'000.	Gross Revenue. £'000.	Working Expenses £'000.	Net Earnings. £'000.	Interest. £'000.	Percentage of Working Expenses on Gross Revenue. %	Car Miles. '000.	Passengers carried. '000.	Persons employed at end of year.
1939	29	664	179	153	26	27	85.47	2,049	15,595	337
1943	29	694	260	198	62	29	76.15	2,463	23,252	401
1944	31	711	273	170	103	29	62.27	2,537	31,170	410
1945	31	748	290	190	100	41	65.52	2,606	31,729	458
1946	34	767	310	172	138	16	55.43	2,629	33,469	499

AUSTRALIA.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. £'000.	Gross Revenue. £'000.	Working Expenses £'000.	Net Earnings. £'000.	Interest. £'000.	Percentage of Working Expenses on Gross Revenue. %	Car Miles. '000.	Passengers carried. '000.	Persons employed at end of year.
1939	586	26,275	7,649	6,089	1,560	909	79.60	81,361	695,476	(b) 17,207
1943	591	26,533	10,507	7,746	2,761	837	73.73	85,441	990,482	18,006
1944	602	26,888	11,238	8,372	2,866	827	74.50	87,157	1,083,212	19,051
1945	603	27,156	11,265	8,420	2,845	790	74.74	87,756	1,069,716(a)	20,149
1946	606	27,428	11,313	8,858	2,455	724	78.29	88,878	1,049,254(a)	20,938

(a) *See* note (a) to table in para. 2 above. (b) Includes motor omnibus employees in South Australia.

D. MOTOR OMNIBUS PASSENGER SERVICES.

1. **General.**—Motor omnibus passenger services have been in operation for some years in the capital cities and some of the larger towns of the States of Australia, and in the Australian Capital Territory.

Governmental and Municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. **Government and Municipal Services.**—(i) *Summary of Operations*, 1945–46. In the following table a summary is given of the operations during the year ended 30th June, 1946 of omnibus systems controlled by Governmental and Municipal authorities.

GOVERNMENT AND MUNICIPAL MOTOR OMNIBUS PASSENGER SERVICES, 1945–46.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Australia.
Length of route ..	miles	450	69	35	21	(*a*) 238	23	10	846
Number of buses ..	No.	509	315	34	61	31	17	29	996
Capital cost	£'000	1,193	736	89	151	78	26	25	2,298
Bus mileage run	'000 miles	18,549	7,865	1,007	1,250	975	187	702	30,535
Passenger journeys ..	'000	*b* 125,160	70,196	8,114	6,268	4,602	1,615	3,404	*b* 219,359
Gross traffic receipts ..	£'000	1,565	752	87	98	61	15	39	2,617
Working expenses ..	£'000	(*c*) 1,850	667	67	117	61	12	55	2,829
Number of employees ..	No.	3,108	1,357	85	(*d*)	41	(*e*) 8	100	(*f*) 4,699

(*a*) Includes railway bus service, Perth-Kojonup. (*b*) Excludes passengers across Sydney Harbour Bridge whose journeys did not extend beyond the Bridge section. (*c*) Includes estimate of administrative and general charges. (*d*) Not available, employees interchangeable with Electric Tramways and included therein (Section C.). (*e*) Excludes employees Hobart Municipal buses, who are interchangeable with Electric Tramways and included therein (see Section C.). (*f*) See notes (*d*) and (*e*).

(ii) *Summary of Operations, Australia.* The following table gives a summary of the working of motor omnibus passenger services in Australia under Governmental and Municipal control during the five years ended 1945–46.

GOVERNMENT AND MUNICIPAL MOTOR OMNIBUS PASSENGER SERVICES : SUMMARY OF OPERATIONS, AUSTRALIA.

Particulars.		1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Mileage open for traffic	miles	(*a*)	(*a*)	760	768	846
Number of buses	No.	872	901	949	997	996
Cost of plant and equipment..	£'000	2,127	2,116	2,196	2,275	2,298
Gross revenue	£'000	2,485	2,493	2,458	2,508	2,617
Working expenses	£'000	2,037	2,289	2,353	2,599	2,829
Net revenue	£'000	448	204	105	— 91	— 212
Percentage of working expenses on gross revenue	%	82.00	91.80	95.73	103.65	108.09
Percentage of net revenue on capital cost	%	21.06	9.34	4.78	—4.03	—9.22
Bus miles run ..	'000 miles	28,359	29,349	29,555	29,745	30,535
Gross revenue per bus mile run	d.	21.02	20.39	19.96	20.23	20.57
Working expenses per bus mile run	d.	17.24	18.72	19.11	20.97	22.23
Net revenue per bus mile run	d.	3.78	1.67	0.85	—0.74	—1.66
Passenger journeys ..	'000	192,590	203,791	209,354	214,919	219,359
Passenger journeys per bus mile	No.	6.79	6.94	7.08	7.26	7.18
Average gross revenue per passenger journey	d.	3.10	2.94	2.81	2.80	2.86
Persons employed	No.	4,566	4,619	4,857	4,774	4,699

(*a*) Not available.

3. **Privately Controlled Services.**—(i) *General.* Particulars of motor omnibus passenger services under the control of private operators are recorded in the States of New South Wales, South Australia and Western Australia only.

In New South Wales, particulars are compiled for the Metropolitan and Newcastle Transport Districts only, but in South Australia and in Western Australia all operators throughout the State are covered.

(ii) *Summary of Operations.* The operations of motor omnibus passenger services under the control of private operators in these States during the five years ended June, 1946, are shown in the following table.

PRIVATE MOTOR OMNIBUS PASSENGER SERVICES : SUMMARY OF OPERATIONS.

Year.	Buses.	Bus-miles Run.	Passenger-Journeys.	Value of Plant and Equipment.	Gross Revenue.	Persons Employed
	No.	'000.	'000.	£'000.	£'000.	No.
NEW SOUTH WALES.(*a*)						
1941–42 ..	422	10,054	43,905	248	585	730
1942–43 ..	443	9,949	51,035	285	741	755
1943–44 ..	490	10,093	54,118	350	761	835
1944–45 ..	519	10,873	59,474	393	836	899
1945–46 ..	555	12,106	66,117	466	951	991
SOUTH AUSTRALIA.						
1941–42 ..	(*b*) 46	3,925	5,699	(*c*)	238	(*c*)
1942–43 ..	57	3,555	6,876	(*c*)	268	(*c*)
1943–44 ..	57	3,465	7,187	(*c*)	278	(*c*)
1944–45 ..	57	3,520	7,571	(*c*)	295	(*c*)
1945–46 ..	68	3,787	8,269	(*c*)	325	(*c*)
WESTERN AUSTRALIA.						
1941–42 ..	268	9,337	21,938	(*c*)	516	548
1942–43 ..	262	8,840	24,201	(*c*)	582	554
1943–44 ..	270	8,080	24,415	(*c*)	594	586
1944–45 ..	260	8,050	25,180	(*c*)	611	634
1945–46 ..	269	8,514	26,396	218	626	671

(*a*) Metropolitan and Newcastle Transport Districts only. (*b*) Metropolitan area only. (*c*) Not available.

E. FERRY (PASSENGER) SERVICES.

1. **General.**—In New South Wales ferry services have been established by private companies to transport passengers in the ports of Sydney and Newcastle. In Western Australia services are operated on the Swan River at Perth under both Government and private control. Passenger ferries in Tasmania are under both Government and private control and operate on the Derwent River at Hobart and also at Devonport. Inextensive services operate in the States of Victoria and Queensland, but no ferry services are in operation in South Australia.

2. **Summary of Operations.**—The following statement gives a summary of operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1942–43 to 1945–46 compared with the year 1938–39. Particulars of passengers carried on vehicular ferries are not included.

FERRY (PASSENGER) SERVICES (Exclusive of Vehicular Ferries).

Year.	Vessels.	Passenger Accommodation.	Passenger Journeys.	Gross Revenue.	Persons Employed.
	No.	No.	'000.	£	No.
NEW SOUTH WALES—SYDNEY AND NEWCASTLE.					
					(a)
1938–39	54	38,971	27,864	418,500	830
1942–43	51	29,487	33,387	506,255	670
1943–44	45	28,809	34,588	540,513	730
1944–45	47	29,369	36,673	533,853	586
1945–46	46	28,551	35,737	518,867	441
WESTERN AUSTRALIA—PERTH.					
1938–39	6	880	1,184	11,001	25
1942–43	7	1,030	1,452	14,506	26
1943–44	7	1,022	1,522	14,655	25
1944–45	7	1,022	1,475	15,284	25
1945–46	7	1,022	1,443	13,739	25
TASMANIA.					
1945–46 (b)	8	856	953	23,369	28

(a) Includes administrative staff for years prior to 1944–45. (b) Particulars are not available for earlier years.

F. MOTOR VEHICLES.

1. **Motor Industry.**—Although motor cars have not hitherto been entirely manufactured in Australia the capital invested in assembling and body-building plants is considerable. The importance of the industry is shown by the following figures which relate to the local manufacture of motor bodies and the importation of motor cars, fuel and tyres during 1938–39 and the four years ended 1945–46.

MOTOR VEHICLES, ETC.: LOCAL MANUFACTURE AND IMPORTS, AUSTRALIA.

Particulars.	Unit.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Motor bodies built ..	No.	79,436	44,286	29,309	22,805	19,473
	£A.	6,421,142	4,652,771	2,582,912	2,530,043	2,356,778
Imports—						
Motor bodies ..	No.	532	270	694	6	223
	£A.	70,943	71,405	66,175	1,423	37,410
Chassis ..	No.	76,094	14,547	9,186	6,660	10,113
	£A.	8,037,228	4,456,808	3,186,885	3,464,820	2,064,478
Chassis and motor parts	£A.	1,199,628	6,919,250	12,002,864	7,717,761	6,286,013
Crude petroleum ..	Mill. gal.	54	..	1	..	16
	£A.	562,222	5,524	5,332	3,074	251,804
Petroleum spirit ..	Mill. gal.	345	347	372	287	371
	£A.	6,525,087	10,627,243	12,444,666	9,306,299	9,880,393
Pneumatic tyres and tubes ..	lb.	322,764	559,806	126,269	299,022	1,376,916
	£A.	35,188	243,734	40,969	40,247	206,917

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State are referred to in Official Year Book No. 116, pp. 337–40, and later issues.

3. **Public Vehicles.**—In all the capital cities of the States and in many of the provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years, and has had a marked effect on railway and tramway services. The constitution of Boards empowered to allocate the routes over which omnibuses may operate arose from the belief that the economic waste, resulting from duplication by running services parallel with or contiguous to existing railway and tramway systems, is thus avoided. In some States the railway and tramway systems run motor services complementary to their main services to meet the competition of private enterprise and to endeavour to protect the existing transport utilities provided by public bodies. In addition, there has been a considerable replacement, during the last few years, of existing tramway services by trolley-bus and motor-bus services. (See Section D.)

5. **Motor Vehicles on the Register, etc.**—(i) *Year* 1945–46. Particulars of the registration of motor vehicles, licences issued and revenue received for 1945–46 are contained in the following table. A graph showing motor vehicle registrations since the year 1920 may be found on p. 158.

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1945–46.

(Excluding Defence Service Vehicles.)

State or Territory.	Motor Vehicles Registered at 30th June, 1946.(*a*)					Drivers' and Riders' Licences in force at 30th June, 1946.	Gross Revenue derived from—			
	Motor Cars.(*b*)	Commercial Vehicles (*c*)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June, 1946.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.	No.	£	£	£	£
N. S. Wales ..	192,335	98,245	20,492	311,072	105.62	518,644	2,278,547	267,446	99,726	2,645,719
Victoria ..	146,605	*d*102196	23,249	272,050	134.30	401,610	1,671,996	100,413	107,351	1,879,760
Queensland ..	71,003	63,694	8,627	143,324	131.56	188,564	808,748	77,174	86,371	972,293
South Australia	61,937	28,768	10,110	100,815	158.77	138,706	577,414	63,436	16,037	656,887
Western Aust.	31,408	28,668	6,799	66,875	135.73	89,141	327,188	29,007	40,692	396,887
Tasmania ..	17,356	7,831	3,200	28,387	112.64	34,932	202,333	17,466	28,485	248,284
Northern Terr.	337	3,023	103	3,463	328.09	2,553	5,564	952	..	6,516
Aust. Cap. Terr.	1,634	704	121	2,459	154.96	3,890	11,054	1,834	70	12,958
Australia ..	522,615	333,129	72,701	928,445	124.35	1,378,040	5,882,844	557,728	378,732	6,819,304

(*a*) Excludes Trailers (38,313), Road Tractors, etc. (3,933), and Dealers' Plates (2,237).
(*b*) Includes Taxis and Hire Cars. (*c*) Includes Lorries, Vans, Buses and Utility Trucks.
(*d*) Includes 55,981 vehicles registered as primary producers'.

(ii) *Years* 1938–39 *to* 1945–46. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1942–43 to 1945–46 in comparison with 1938–39 :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, AUSTRALIA.

(Excludes Defence Service Vehicles.)

Year.	Motor Vehicles Registered at 30th June.					Drivers' and Riders' Licences in force at 30th June.	Gross Revenue derived from—			
	Motor Cars.	Commercial Vehicles. (*a*)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.	No.	£	£	£	£
1938–39	562,271	258,025	79,237	899,533	129.09	1,238,497	6,318,435	508,387	257,652	7,084,474
1942–43	471,742	255,933	48,321	775,996	107.25	1,185,398	4,982,634	439,509	267,416	5,689,559
1943–44	493,391	274,269	52,560	820,220	112.20	1,232,442	5,232,772	451,156	273,700	5,957,628
1944–45	505,782	290,961	57,239	853,982	115.52	1,180,589	5,354,624	484,376	300,435	6,139,435
1945–46	522,615	333,129	72,701	928,445	124.35	1,378,040	5,882,844	557,728	378,732	6,819,304

(*a*) Includes primary producers' vehicles, Victoria.

(iii) *Relation to Population.* The table hereunder gives the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State at 31st December, 1921, and at 30th June for each of the years 1939 and 1943 to 1946 :—

MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

(Excludes Defence Service Vehicles.)

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921 ..	15	16	8	24	12	13	(*a*)	..	15
30th June, 1939 ..	107	125	118	137	133	96	218	174	118
,, 1943 ..	87	110	105	125	108	88	117	133	101
,, 1944 ..	91	114	112	131	110	94	167	128	105
,, 1945 ..	93	117	114	134	112	97	235	142	108
,, 1946 ..	99	123	124	143	122	100	318	147	115

(*a*) Not available.

(iv) *Revenue per Motor Vehicle.* The following table gives the average revenue per vehicle (excluding motor cycles) received in respect of registration and motor tax in the several States for the year 1938–39 and for each year from 1942–43 to 1945–46. In some States the revenue from motor tax on cycles is not separately recorded. In these cases an amount based on the flat rate provided for cycles in the registration acts has been deducted from the total revenue received, and the average amounts shown must therefore be regarded as approximate only. Registration fees and motor taxes were reduced, during the year 1941–42, in the States of New South Wales, Victoria and Western Australia. In South Australia the reduction was made in the last half of

1940–41. The reduction was generally 25 per cent., except in the case of New South Wales, where it was 20 per cent. In July, 1942, Australian Capital Territory fees were reduced by 15 per cent.

AVERAGE REVENUE PER VEHICLE FROM REGISTRATION FEES AND MOTOR TAX (EXCLUDING MOTOR CYCLES).

State or Territory.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
New South Wales ..	7 19 10	7 18 10	7 16 6	7 13 8	7 15 7
Victoria	7 6 0	6 3 8	6 4 7	6 7 8	6 13 6
Queensland.. ..	6 15 11	5 14 11	5 15 1	5 14 9	5 19 1
South Australia ..	7 9 10	6 6 4	6 2 3	6 4 2	6 6 8
Western Australia ..	6 6 0	5 17 8	6 0 5	5 9 5	5 8 1
Tasmania	6 13 3	7 12 11	7 13 10	7 18 5	7 19 6
Northern Territory ..	1 11 0	1 11 8	1 1 4	0 16 10	1 12 9
Aust. Cap. Territory	5 15 2	5 9 10	5 7 5	4 14 7	4 14 1
Australia ..	7 7 9	6 14 10	6 14 0	6 13 4	6 16 6

6. **New Vehicles Registered.**—(i) *Year* 1945–46. The following table gives the number of new vehicles registered in each State during 1945–46 :—

NEW MOTOR VEHICLES REGISTERED, 1945–46.

(Excludes Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.(*b*)	W.A.	Tas.	A.C.T.	Total. (*b*)
Motor Cars	526	1,208	82	160	100	43	4	2,123
Commercial Vehicles, etc.. .	3,288	(*a*)2,329	1,529	727	456	351	6	8,686
Motor Cycles	681	378	155	396	270	73	..	1,953
Total	4,495	3,915	1,766	1,283	826	467	10	12,762

(*a*) Includes vehicles registered as primary producers' vehicles. (*b*) Excludes Northern Territory.

(ii) *Years* 1938–39 *and* 1942–43 *to* 1945–46. Particulars of the number of new vehicles registered in Australia during the years 1938–39 and 1942–43 to 1945–46 are shown in the following table :—

NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(*a*)

(Excludes Defence Service Vehicles.)

Vehicles.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Motor cars	54,107	2,360	825	899	2,123
Commercial vehicles, etc. (*b*)	24,927	3,084	12,635	7,654	8,686
Motor cycles	7,370	389	340	411	1,953
Total	86,404	5,833	13,800	8,964	12,762

(*a*) Excludes Northern Territory. (*b*) Includes vehicles registered as primary producers' vehicles, Victoria.

7. **World Motor Vehicle Statistics, 1947.**—The result of the 1947 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were 44,887,058 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1947. This shows an increase of 17.3 per cent. on the figure for the previous year, 38,249,581, and is the highest figure attained to that date.

The following table shows the numbers of motor vehicles registered in each continent at 1st January, 1947 :—

MOTOR VEHICLES: WORLD REGISTRATIONS AT 1st JANUARY, 1947.

Continent, etc.	Total Automobiles.	Motor Cars.(a)	Motor Trucks and Buses.(a)
Africa	608,900	432,454	163,767
America (exclusive of United States of America)	2,792,710	1,918,936	817,742
United States of America	33,233,975	27,496,096	5,737,879
Asia	421,938	201,665	191,898
Europe	6,580,951	3,711,482	2,815,879
Oceania	1,248,584	800,943	445,619
Total	44,887,058	34,561,576	10,172,784

(a) Not complete for all territories.

The next table gives particulars of the numbers of motor vehicles registered in various countries, together with their approximate populations for the purposes of comparison :—

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1947.

Country.	Approximate Population in Millions.	Motor Cars, Trucks and Buses.
Australia	8	901,102
Argentine	16	285,610
Canada	12	1,587,795
France	40	1,300,000
Germany	66	142,527
Great Britain	48	2,448,065
India	311	170,000
Italy	46	205,000
Japanese Empire	75	47,000
New Zealand	2	287,398
Union of South Africa	2	354,740
United States of America	141	33,233,975

The foregoing figures are in some cases approximations based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries, and in other cases are incomplete.

8. **Petrol Rationing.**—Petrol rationing was first enforced in Australia in October, 1940, a little more than twelve months after the commencement of the 1939–45 War. No very drastic cuts in consumption were made for some time, but, commencing in April, 1941, when the replenishment of stocks from overseas supply sources was becoming increasingly difficult and uncertain, progressive reductions in the monthly allowances to civilian users were made, the basic ration being finally reduced to the equivalent of only 800 miles of running per annum. The period of severest rationing lasted from late in 1941 until towards the end of 1944, non-military consumption during these three years or thereabouts being at a rate not very much in excess of one-third of the estimated pre-war rate of 30 million gallons per month.

With the improvement in the war situation in 1944, it was found possible, without making any specific amendment of the rationing schedules, to do something in the direction of granting claims for additional allowances of petrol in individual cases where circumstances appeared to justify this course and to relax to some extent the very heavy pressure which had been applied during the critical years of the war to enforce the use of producer gas units.

The first general increase in the ration scale was made in September, 1945, following the Japanese surrender, the allowances to private motorists and primary producers being increased by 25 per cent. A further all-round increase of 25 per cent. to all classes of users was made a month later, bringing the private motorist's allowance to 120 miles of running per month.

As essential users of motor spirit were already receiving practically their full requirements, such further liberalizing of the monthly allowances as became possible in the post-war period was mainly for the benefit of private motorists. By successive stages the monthly allowance for this class increased from 120 miles of running per month as at the end of 1945, to 270 miles as from December, 1946. An increase from 120 miles to 180 miles per month had been brought into effect as from February, 1946, with a further increase to 240 miles as from July, 1946. At the same time the rations of holders of private-plus-business licences and others of a like character were increased to an extent sufficient to avoid any anomaly as between such classes and the purely private motorist.

There was, perhaps, a good deal of justification for the popular expectation, following the cessation of hostilities in August, 1945, that, once the inevitable settling-down period had passed, and the supply lines had been restored to something approaching the pre-war normal, the end of petrol rationing would be in sight. Many factors, some of them unforeseen at the time and others entirely beyond Australian control or capacity to influence, conspired to postpone the date when war-time controls affecting petrol could be entirely removed ; Government action in this matter was accordingly directed to the further easing of restrictions and removal of anomalies and to ensuring that the supplies made available from overseas were distributed equitably and to the best advantage. Amongst other things, it was possible, with the ending of the war in Europe, to cease to enforce the use of producer gas units, with the result that, by the end of 1946, producer gas, which had played so valuable a part in reducing the civilian demand on imported motor spirit in the more difficult days, had practically ceased to be used as a substitute for liquid fuels.

Viewed on a world basis, i.e., sterling and dollar sources, the supply of petroleum products was, in general, sufficient in relation to world demands to have enabled petrol rationing to be lifted at the end of 1945, had this been the only consideration to be taken into account. The sterling-area production of motor spirit and the availability of sterling tankers were, however, not sufficient at that time to meet the unrationed demands of the sterling area, and imports into that area of large supplies of dollar-area oil in dollar tankers would have been necessary to enable restrictions on consumption to be completely removed.

The whole question of petrol rationing and supplies was reviewed by the Government from time to time between the end of 1945 and May, 1947. Partly because of industrial troubles which seriously affected railway and tramway services in some of the States in the latter part of 1946 and in the earlier months of 1947 (necessitating at times the transport by road of great quantities of goods normally carried by the railways and the authorization of special issues of petrol to a large number of road users), the monthly consumption of motor spirit rose to between 31 million gallons and 34 million gallons on several occasions between September, 1946, and March, 1947. This led to a decision by the Commonwealth Government, in March, 1947, after reviewing the supply position with the Government of the United Kingdom, to continue petrol rationing for an indefinite period and to administer the rationing plan somewhat more rigidly than had been the case for some time past. In reaching this decision, the Government was influenced, as on earlier occasions when the question had been under consideration, by the fact that, although Australia was still receiving almost the whole of its petrol supplies from the sterling area around the Persian Gulf, because the shortest tanker haul was thereby involved, production in that region was not sufficient to meet the demands of the whole sterling area, the effect of which was that the United Kingdom was under the necessity to draw its supplies largely from dollar sources—on the tanker short-haul principle. Larger allocations to Australia from the Persian Gulf to meet the steadily increasing consumption in Australia would necessarily have compelled Great Britain herself to draw more heavily on dollar supplies of petrol, thus aggravating the seriously deteriorating dollar-funds position. In the light of these facts and of the desire of the Government of the United Kingdom to have Australia's continued co-operation in this respect, the Commonwealth Government had no alternative but to maintain and tighten up the rationing system for the time being, especially in view of the need that still existed to charter a large number of American tankers each month (requiring payment of freight in dollars) for the carriage of sterling petrol. A further factor taken into account was that world prices of petrol were increasing, thus adding to the drain on the dollar funds needed to pay for that portion of the Empire's petrol requirements which had to be drawn from the dollar area. The need to conserve dollars became more acute during the latter part of 1947, with the result that an average overall reduction of approximately ten per cent. in the petrol consumption of all users operated from 1st October, 1947, followed by a further reduction of ten per cent. from 1st January, 1948. The current position is that essential transport is now, generally speaking, receiving most of its requirements of petrol, although the private motorist is still receiving less than his pre-war usage.

A more detailed account of the operation of petrol rationing up to February, 1946, appears in Official Year Book No. 36, pp. 160–3.

9. **Control of Tyres, Spare Parts and Mechanical Services.**—The war-time control of tyres, spare parts and mechanical services which was referred to in Official Year Book No. 36, page 163, has now been abolished.

G. TRAFFIC ACCIDENTS.

1. **General.**—The practice of reporting accidents occurring in public thoroughfares is not uniform throughout Australia. In some States the reporting of minor accidents has not been enforced, while other States require that all accidents be reported. Hence the figures for each State are not entirely comparable with regard to the number of accidents, and to a lesser extent with regard to the number of persons injured.

2. **Total Accidents Registered.**—(i) *Year* 1945–46. The following table gives particulars of the number of persons killed and injured in accidents (known to the police) which occurred in public thoroughfares during 1945–46 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, 1945–46.

State or Territory.	Accidents.	Persons Killed.			Persons Injured.		
		Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.	Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.
New South Wales	10,565	483	0.16	0.16	7,342	2.50	2.36
Victoria ..	11,171	336	0.17	0.12	6,202	3.08	2.28
Queensland ..	7,233	169	0.16	0.12	3,656	3.37	2.55
South Australia ..	7,181	97	0.15	0.10	2,333	3.70	2.31
Western Australia	4,310	127	0.26	0.19	756	1.54	1.13
Tasmania ..	3,067	58	0.23	0.20	799	3.19	2.81
Aus. Cap. Territory	83	..	..	..	26	1.68	1.06
Total ..	43,610	1,270	0.17	0.14	21,114	2.85	2.27

The ages of the persons killed and injured are given below :—

AGES OF PERSONS KILLED OR INJURED, 1945–46.

State or Territory.	Under 10 years.		10 to 59 years.		60 years and over.		Age not known.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
N. S. Wales ..	51	728	329	5,869	103	745	..	..	483	7,342
Victoria ..	16	584	235	4,800	82	625	3	193	336	6,202
Queensland ..	(a) 21	(a) 490	(b) 122	b 2,745	26	366	..	55	169	3,656
South Aust. ..	7	228	67	1,843	23	262	..	..	97	2,333
Western Aust.	(c) 13	(c) 101	(d) 87	(d) 602	(e) 27	(e) 53	..	..	127	756
Tasmania ..	7	73	(f) 39	(f) 681	(e) 12	(c) 45	..	..	58	799
Aus. Cap. Terr.	..	..	..	23	..	..	..	3	..	26
Total ..	115	2,204	879	16,563	273	2,096	3	251	1,270	21,114

(a) Under 15. (b) Fifteen to 59. (c) Under 16. (d) Sixteen to 60. (e) Over 60. (f) Ten to 60.

(ii) *Years* 1938–39 *to* 1945–46. Approximate figures relating to the persons killed and injured in traffic accidents in Australia during the years 1938–39 to 1945–46 are given hereunder :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, AUSTRALIA.

Particulars.	1938–39.	1939–40.	1940–41.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Persons killed ..	1,433	1,560	1,298	1,297	1,340	1,089	1,011	1,270
,, injured ..	25,653	26,142	23,340	17,529	16,236	14,785	15,643	21,114

For further particulars of Traffic Accidents see *Transport and Communication Bulletin* No. 37.

H. AVIATION.

1. **Historical.**—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration appears in Official Year Book No. 16, pp. 334–5.

2. **Foundation and Administration of Civil Aviation.**—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. In 1936 the organization was changed and the responsibility of regulating and controlling civil aviation in Australia was entrusted to a Board, consisting of four members and a secretary. The Board was responsible to the Minister for Defence and continued to function as a unit of the Defence Department organization until November, 1938. In January, 1939, the Civil Aviation Board was abolished and the Civil Aviation Administration was made a separate Department under the Minister for Civil Aviation. The permanent Head of the Department is the Director-General of Civil Aviation.

The broad principles of the operations of the Administration of Civil Aviation are defined by Acts of Parliament and amplified by Regulations under the Acts. The more important relevant Acts and Regulations are (*a*) the Air Navigation Act and Regulations which prescribe the rules for the control of aircraft and air navigation ; (*b*) the Carriage by Air Act which gives effect to the International Convention for the unification of certain rules relating to International Carriage by Air ; and (*c*) the Quarantine (Air Navigation) Regulations which give effect to the International Sanitary Convention for Aerial Navigation.

The principal functions of the Administration are (*a*) the safety of civil flying ; (*b*) the licensing of pilots, ground engineers, navigators, and radio operators together with the supervision of all such work ; (*c*) the supervision of operations and licensing of airline companies for the carriage of mails, passengers, and freight ; (*d*) the making of contracts and payments of subsidies and payments for the carriage of mails ; (*e*) the construction and maintenance of aerodromes and seaplane bases and works in connexion therewith ; (*f*) the provision, operation, and maintenance of aeradio stations throughout Australia and Territories ; (*g*) the supervision of aircraft maintenance and aircraft design ; (*h*) the promotion of civil flying and training of pilots and ground staff ; and (*i*) liaison with international civil aviation organizations.

The organization is controlled from the head office in Melbourne, which directs the policy, planning, finance, and developmental aspects, and from out-stations throughout Australia and Papua-New Guinea at which are stationed the staff supervising aeradio, flight control, and maintenance.

A form of regional organization is under consideration by which a policy of decentralization will enable activities to be effected by a greater measure of local administrative control. In addition, certain field work could be undertaken by the proposed regional staff.

3. **International Activity.**—(i) *The Provisional International Civil Aviation Organization* (*PICAO*). Tremendous impetus was given to civil aviation in the international sphere by the International Civil Aviation Conference convened at Chicago by the United States of America during November and December, 1944, which was attended by 52 nations.

As a result of the deliberations of this Conference the following instruments were formulated :—(*a*) Interim Agreement on International Civil Aviation ; (*b*) Convention on International Civil Aviation ; (*c*) International Air Services Transit Agreement (conferring freedoms 1 and 2) ; (*d*) International Air Transport Agreement (conferring freedoms 1, 2, 3, 4 and 5).

The five freedoms in each other's territories to be granted to signatory States of the various Agreements were defined as—(*a*) the privilege to fly across its territory without landing ; (*b*) the privilege to land for non-traffic purposes ; (*c*) the privilege of disembarking passengers and unloading mail and cargo taken on in the territory of the State whose nationality the aircraft possesses ; (*d*) the privilege of embarking passengers and loading mail and cargo destined for the territory of the State whose nationality the aircraft possesses ; (*e*) the privilege of embarking passengers and loading mails and cargo destined for the territory of any other contracting State, and the privilege of disembarking passengers or unloading mails and cargo coming from any such territory.

By June, 1946, when the Interim Assembly met, twenty-eight nations had signed the Transit Agreement(*c*), but only sixteen had signed the Transport Agreement (*d*). Since then, four signatory states to the latter agreement have denounced their acceptance of it. Lacking a multilateral agreement, commercial rights in civil aviation are regulated mainly by bilateral pacts. Efforts are still being made to develop a multilateral agreement.

Under the Interim Agreement (accepted by 46 nations including Australia up to 30th January, 1946) which was designed to cover the period that would elapse before the Convention on International Civil Aviation was ratified by the minimum number of 26 States necessary to make it effective, a Provisional International Civil Aviation Organization was set up. This provisional organization consisted broadly of an Interim Assembly of all member States meeting annually and an Interim Council of 21 members on which Australia was represented, presided over by a President.

The only meeting of the Assembly of PICAO was convened at Montreal, Canada (the permanent seat of the organization) on 21st May, 1946, and Australia was represented by a strong delegation.

In the relatively short period of its existence PICAO made rapid strides in the investigation of many complex economic and technical problems facing international civil aviation. It planned for the many facilities and services required for safe international flight, and emphasized making arrangements to provide adequate air navigation facilities and to set up standards of operation and safety. It held Air Navigation Meetings in various areas of the world (including Melbourne, Victoria)—(1) to determine, within each region, the air navigation facilities available, and those required, for international civil air transport; (2) to develop regional operating procedures for air crew and grounds personnel; and (3) to recommend arrangements to collect and distribute data necessary for navigation in the region. ICAO will continue these meetings. At the request of PICAO, in September and October, 1946, the Governments of the United Kingdom, the United States of America and Australia demonstrated their latest radio communications and air navigation aids. This enabled delegates and observers to make recommendations to the Council for the progressive standardization of equipment. PICAO also evolved a plan to simplify and standardize customs, immigration, public health and other formalities.

(ii) *The International Civil Aviation Organization (ICAO). (a) Formation, Aims, Constitution, Functions, etc.* By 5th March, 1947, the necessary twenty-six ratifications of the Convention on International Civil Aviation had been received. By the time ICAO had come into legal being—4th April, 1947—nine more States had ratified the convention. Since then there have been further ratifications.

The aims and objectives of the new organization, as detailed in the Final Act of the Chicago Conference, are :—

> " To develop the principles and techniques of international air navigation and to foster the planning and development of international air transport so as to ensure the safe and orderly growth of international civil aviation throughout the world; to encourage the arts of aircraft design and operation for peaceful purposes; to encourage the development of airways, airports, and air navigation facilities for international civil aviation; to meet the needs of the peoples of the world for safe, regular and efficient air transport; to prevent economic waste caused by unreasonable competition; to ensure that the rights of Contracting States are fully respected, and that every Contracting State has a fair opportunity to operate international airlines; to avoid discrimination between Contracting States; to promote safety of flight in international air transportation; to promote generally the development of all aspects of international civil aeronautics."

ICAO consists of a legislative body (the Assembly) and an executive body (the Council). The Council's President is a salaried official and acts as its permanent representative. Functions of the Council include provision for the establishment of subsidiary working groups, including an Air Transport Committee and an Air Navigation Commission; the supervision and co-ordination of the work of the Council's principal committees; the consideration and transmission of their reports, together with the Council's own findings, to Member States; the making of recommendations to Member States; and the submission of a report to the Assembly. It must act as a tribunal to settle certain disputes, if ICAO's intervention is requested by one of the parties concerned.

The expenses of ICAO are borne by Member States in accordance with a set scale of contributions.

ICAO may, under certain conditions, provide technical and financial aid to Member States for the establishment, operation and maintenance of the aerodromes and navigational facilities required for the safe, regular, efficient and economic operation of international air services.

(*b*) *First Assembly Meeting.* The first Assembly meeting of ICAO extended from 6th to 27th May, 1947. It was held in Montreal, Canada, the permanent seat of the organization. Thirty-six contracting States, eleven non-contracting States and seven international organizations took part. The Honorable A. S. Drakeford (Australia) was elected President of the Assembly, which met nine times in plenary session, the remainder of its time being spent in commissions.

The plenary sessions were devoted to addresses of welcome, statements of national policy, the election of office-bearers, the establishment of the six commissions, the presentation of reports of the Interim Council and of the Air Transport Committee and the consideration of reports of the commissions, the election of the ICAO Council, etc. The Council has twenty-one members: Belgium, Brazil, Canada, France, Mexico, the Netherlands, the United Kingdom and the United States of America in Category A (" States of chief importance in air transport "); Argentina, Australia, China, Egypt, India, Ireland and Portugal in Category B (" States not otherwise included which make the largest contribution to the facilities for international civil air navigation "); and Chile, Czechoslovakia, Iraq, Peru, Sweden and Turkey in Category C (" States not otherwise included whose designation will ensure that all major geographical areas of the world are represented on the Council ").

Separate commissions dealt with each of the following subjects :—(1) Constitutional and general policy questions; (2) technical questions; (3) economic questions; (4) legal questions; (5) administrative and financial questions; and (6) financial and technical aid through ICAO.

(iii) *The International Commission for Air Navigation* (*ICAN*). ICAN, which was formulated in Paris in 1919 and of which Australia is a member, was the corner stone upon which the Air Navigation Regulations were built. In the terms of the Convention on International Civil Aviation formulated at Chicago, each contracting State undertook, immediately upon the coming into force of the Convention, to give notice of denunciation of ICAN, this organization to be replaced by ICAO as the co-ordinating body in international air navigation.

(iv) *British Commonwealth Talks—The Commonwealth Air Transport Council* (*CATC*) *and the South Pacific Air Transport Council* (*SPATC*). Immediately before and after the Chicago Conference on International Civil Aviation (see above), conversations in which Australia took part, affecting civil aviation in British Commonwealth countries, were held at Montreal and also at London. Out of these discussions came the decision to establish a Commonwealth Air Transport Council. This Council is representative of United Kingdom, Canada, Australia, New Zealand, South Africa, India, Newfoundland, Southern Rhodesia and the Colonial Empire and Eire. Its functions are—(*a*) to keep under review the progress and development of Commonwealth Civil Air Communications; (*b*) to serve as a medium for exchange of views and information between the Commonwealth Countries on Civil Air Transport matters; (*c*) to consider and advise on such civil aviation matters as any Commonwealth Government may desire to refer to the Council.

CATC held its first meeting in London in July, 1945. As a result of the meeting, the technical body known as CERCA (Commonwealth and Empire Conference on Radio for Civil Aviation) and a newly formed organization CANGO (Committee on Air Navigation and Ground Organization) were brought under the aegis of CATC. Additionally, of particular Australian interest, it was agreed (*a*) that Qantas Empire

Airways Ltd. and British Overseas Airways Corporation would be invited to operate parallel through services between United Kingdom and Australia via India ; (*b*) that a joint Australian-New Zealand-United Kingdom organization be established for operating, in parallel with a Canadian organization, the Pacific Trunk Route ; and (*c*) that consideration be given to the formation of a South Pacific Air Transport Council to deal with problems peculiar to the area.

In furtherance of the CATC meeting a conference on civil aviation problems affecting Australia, New Zealand and United Kingdom in the South Pacific region was held at Wellington, New Zealand, in February, 1946, as a result of which the following main recommendations were made :—(*a*) that there should be established an advisory body to be known as the South Pacific Air Transport Council open to the following membership —United Kingdom, Canada, Australia, New Zealand, Fiji and the Western Pacific High Commission ; and (*b*) that there should be established and registered forthwith in Australia a tripartite organization to be known as British Commonwealth Pacific Airlines for the operation of trans-Pacific trunk services between Australia and North America and between New Zealand and North America in parallel partnership with the designated airline of Canada.

At its first meeting in Canberra in December, 1946, SPATC approved the draft directive of the Governments of the United Kingdom, Australia and New Zealand to B.C.P.A. Ltd. to conduct the trans-Pacific air service. It also recommended the setting-up of two standing committees to supervise the running of the trans-Pacific and trans-Tasman services, and proposed certain changes to the draft contract under which Australian National Airways had agreed to operate an interim trans-Pacific service for B.C.P.A. Ltd.

(v) *Oversea Air Service.* (*a*) *Trans-Pacific Services.* In accordance with the decisions of the Wellington Conference, British Commonwealth Pacific Airlines Ltd. was registered in Sydney on 24th June, 1946, as a limited company with a nominal capital of £1,000,000 in proportionate shares of—Australia, 50 per cent. ; New Zealand, 30 per cent. and United Kingdom, 20 per cent. Following an agreement by the Canadian and Australian Governments to operate air services between Sydney and Vancouver, B.C.P.A. Ltd. began operations on 15th September, 1946, with an interim service. At first it was permitted to make only non-traffic stops in the United States of America, but under the Air Transport Agreement between Australia and the United States, signed on 3rd December, 1946, it can pick up and discharge international passengers, cargo and mail at all points on the Sydney–Vancouver route. In April, 1947, a fortnightly service was commenced between Auckland and Vancouver.

Pan-American Airways began operating a weekly San Francisco–Sydney air service in February, 1947. It also operates a fortnightly service to Auckland.

(*b*) *Australia–United Kingdom Air Service.* This service was suspended during the early period of the war. However, in order to meet the minimum needs for carriage of mails and priority passengers, a service by Catalina, and later, Liberator aircraft was established in June, 1944, by the United Kingdom Government via the Indian Ocean from Perth to Ceylon, where connexion was made with other services to the United Kingdom. Ground facilities were provided by the Commonwealth, and the net revenue received from mails by Australia was contributed towards the cost of the service. The service was operated by Qantas Empire Airways Ltd. under contract to the British Overseas Airways Corporation. In June, 1945, the terminal of the service was transferred to Sydney.

As from 12th May, 1946, in accordance with an agreement reached between Australia and the United Kingdom, a parallel service between the two countries was provided for, although the airlines designated to maintain the service—British Overseas Airways Corporation and Qantas Empire Airways Ltd.—were not at this period operating over the whole of the route. Payments were made by the two Governments to their respective operators on an agreed basis and any deficit on the combined operations was to be shared in proportion to the frequency of their own services—at this time equally. Three Lancastrian land plane and two Hythe flying boat trips weekly, in each direction, were being flown at 30th June, 1946. On 1st December, 1947, the Lancastrian land planes were replaced by Constellation planes and the Lancastrian planes were utilized for freight carrying purposes. In practice, Qantas Empire Airways Ltd. operated the sections between Karachi and Singapore of the Lancastrian and Hythe routes respectively, whilst British Overseas Airways Corporation operated west of those points.

(c) *Dutch Air Service to Australia.* The air service from Batavia to Sydney via Darwin, operated by the K.N.I.L.M. Company, ceased during the war years and has not been resumed.

(d) *Trans-Tasman Air Service.* A flying boat service between Sydney and Auckland was inaugurated in April, 1940, by Tasman Empire Airways Ltd., which was established under an agreement between the Governments of New Zealand, Australia and the United Kingdom. The company designated as the Australian shareholder was Qantas Empire Airways Ltd., and the services were operated under the control of the Tasman Air Commission, which comprises representatives of the three interested Governments. At the commencement of the service, the frequency was once weekly but increases were made, from time to time, and nine return trips per fortnight were being operated at 30th June, 1946.

(e) *Air Services in New Guinea.* The civil air services in New Guinea were interrupted by the advance of the Japanese during the early period of the South-West Pacific war. In 1945, Qantas Empire Airways Ltd. acquired the aviation interests of W. R. Carpenter & Co. Ltd. and resumed the operations of the service from Sydney to New Guinea. The temporary northern terminal of the service is Lae.

(f) *Air Service to Japan.* On 16th December, 1947 Qantas Empire Airways Ltd. commenced an air service to Japan, flying by way of Melbourne, Darwin and Manila (Philippine Islands). The service is under charter to the Royal Australian Air Force and replaces a Royal Australian Air Force courier service which had operated since the end of the war. The Lancastrian service was weekly until 2nd January, 1948 and thereafter twice weekly.

4. **Commonwealth Government Purchase of Qantas.**—The Qantas Empire Airways Agreement Act 1946 authorized the Commonwealth Government to purchase the United Kingdom Government's interest (in the form of the British Overseas Airways Corporation's shares) in Qantas Empire Airways Ltd. This involved the purchase of 261,500 fully paid-up £1 shares. The total paid-up capital of Qantas Empire Airways Ltd. was £523,000. On 3rd July, 1947, the sale to the Commonwealth Government of holdings in Qantas Empire Airways Ltd. by shareholders in Queensland and Northern Territory Aerial Services Ltd. was ratified in Brisbane. Qantas Empire Airways is now completely owned by the Commonwealth Government. All other main Empire airway units are owned by their respective Governments or groups of Governments.

5. **Regular Air Services within Australia.**—Since 1920 the grant of financial assistance for the establishment and maintenance of regular air transport services has been a part of the policy of the various Governments towards the development of civil aviation in Australia. On 30th June, 1946, nine companies were operating regular services within Australia under contracts with the Department of Civil Aviation.

During the war years, operations of the airline companies were devoted primarily to national purposes. A large number of aircraft was requisitioned for defence use, and thus was removed entirely from the control of the companies. Other aircraft were operated by the airline companies for defence purposes, including charter and reconnaissance duties in combat areas. As a result the regular air services were, for a long period, operated on a skeleton basis only. Owing to the demand for air travel for national purposes, a priority system, administered by the Department of Civil Aviation, was introduced to organize the flow of air traffic.

Towards the end of hostilities, the position was eased by the return of a number of aircraft to the airline companies and, also, by the acquisition of twelve Douglas aircraft by the Commonwealth Government under Lend-Lease. These military aircraft were converted to Douglas DC3 standard and hired by airline companies for use on regular air services.

An interesting development, during the period under review, has been the decision of the Australian National Airways Pty. Ltd., and later, of Guinea Airways Ltd. (on its Adelaide–Darwin service), Aircrafts Pty. Ltd. and Qantas Empire Airways Ltd. (on its major internal services and the Sydney–Lae service) to operate without direct Government subsidy. In accordance with the amount of mail carried, these companies receive payment at agreed rates. The contract with Guinea Airways Ltd. provides at a rate per pound for mails carried from the terminals of the service. Other companies are paid on a pound-mile basis.

In August, 1945, the Commonwealth Government established by Act of Parliament the Australian National Airlines Commission, a Government instrumentality authorized to operate interstate air services. The Act contained provisions to prevent competition with the Government airlines, but the High Court declared these provisions invalid. The Commission commenced operations on 9th September, 1946, with an interim service between Melbourne and Sydney. The operating body is Trans-Australia Airlines.

The following operators of regular air services appearing in Official Year Book No. 32 have ceased their airline activities :—Air Taxis Pty. Ltd., Adastra Airways Ltd., Airlines of Australia Ltd. (acquired by Australian National Airways Pty. Ltd.), W. R. Carpenter & Co. Ltd. (aviation interests acquired by Qantas Empire Airways Ltd.), North-Western Airlines Ltd., South Queensland Airways Ltd., and Victorian and Interstate Airways Pty. Ltd.

Extensive changes have been made in the network of internal Australian services since the issue of Official Year Book No. 32. Details of the services in operation as at 30th June, 1947, were as follows :—

Operating Companies and Services.	Route Mileage.	Aircraft Used.	Frequency (Return Trips unless otherwise indicated).
Trans-Australia Airlines—			
Melbourne–Sydney ..	460	DC3, DC4 ..	7 daily
Sydney–Brisbane ..	472	DC3, DC4 ..	4 daily
Sydney–Adelaide	749	DC3	1 daily
Melbourne–Hobart ..	381	DC3	2 daily
Melbourne–Launceston ..	291	DC3	2 daily
Adelaide–Perth	1,415	DC4	1 daily
Melbourne–Adelaide ..	405	DC3, DC4 ..	3 daily
Australian National Airways Pty. Ltd.—			
Adelaide–Perth	1,415	DC3, C47 ..	9 weekly
Brisbane–Rockhampton ..	330	DC3	4 daily
Cairns–Burketown ..	449	DH89	1 weekly
Cairns–Cooktown ..	104	DH89	4 weekly
Cooktown–Horn Island ..	423	DH89	1 weekly
Melbourne–Adelaide ..	405	DC3, DC4 ..	11 weekly
Melbourne–Broken Hill ..	447	DC3	1 daily
Melbourne–Hobart ..	381	DC3	3 daily plus 3 freighters weekly
Melbourne – Kerang – Swan Hill	181	DC3	3 weekly
Melbourne–Launceston ..	291	DC3	3 daily
Melbourne–Perth (direct) ..	1,819	DC4	3 weekly
Melbourne–Sydney ..	460	DC3, DC4 ..	9 daily, plus 2 freighters weekly
Melbourne–Launceston via King Island	368	DC3	6 weekly
Launceston–Flinders Island	108	DC3	3 weekly

Operating Companies and Services.	Route Mileage.	Aircraft Used.	Frequency (Return Trips unless otherwise indicated).
Melbourne–Wynyard	230	DC3	6 weekly
Normanton–Koolatah–Normanton	377	DH89	1 round trip weekly
Perth–Kalgoorlie	335	DC2	5 weekly
Rockhampton–Townsville	373	DC3	4 daily
Sydney–Adelaide	749	DC3	2 daily
Sydney–Brisbane	472	DC3	5 daily, plus 2 freighters weekly
Sydney–Canberra	148	DC3	1 daily
Townsville–Cairns	177	DC3	2 daily
Qantas Empire Airways Ltd.—			
Brisbane–Charleville	425	LH10	1 weekly
Brisbane–Darwin	1,856	DC3	2 weekly
Brisbane–Winton	781	DC3	1 weekly
Brisbane–Mount Isa	1,046	DC3	1 weekly
Brisbane–Roma	267	LH10	1 weekly
Cloncurry–Normanton	212	DH83	1 weekly
Sydney–Rabaul	2,509	DC3	3 weekly
Guinea Airways Ltd.—			
Adelaide–Darwin	1,661	DC3	3 weekly
Adelaide–Port Lincoln	158	DC3	5 weekly
Adelaide–Kingscote	88	DC3	4 weekly
Adelaide–Cowell–Cleve	294	DC3	3 round trips weekly
Adelaide–Whyalla–Port Pirie	146	DC3	6 weekly
Adelaide–Broken Hill–Renmark	283	DC3	3 weekly
Aircrafts Pty. Ltd.—			
Brisbane–Kingaroy	102	DH84	4 weekly
Brisbane–Thangool	263	DH84	2 weekly
Brisbane–Rockhampton	349	DH84, LH18	7 weekly, plus freighter Sunday only
Brisbane–Bundaberg	193	DH84, LH18	6 weekly
Kingaroy–Wondai	17	DH84	4 weekly
Airlines (W.A.) Ltd.—			
Perth–Albany	239	DH89, DH90	4 weekly
Perth–Busselton	124	DH89, DH90	1 weekly
Perth–Wiluna–Kalgoorlie–Perth	1,185	DH89, DH90, DH104	2 round trips weekly
Perth–Mount Magnet–Wiluna	521	DH89, DH90, DH104	1 weekly
Perth–Esperance–Kalgoorlie–Perth	1,014	DH89, DH90, DH104	2 round trips weekly
Perth–Port Hedland–Perth	1,849	DH89, DH90	2 round trips weekly
Perth–Rottnest Island	22	DH89, DH90	10 weekly
Perth–Wittenoon Gorge	701	DH89, DH90	1 weekly
Perth–Meekatharra	438	DH89, DH90	1 weekly
Ansett Airways Pty. Ltd.—			
Melbourne–Hamilton	158	LH10	6 weekly
Melbourne–Mount Gambier–Adelaide	457	DC3	1 daily
Melbourne–Hobart	381	DC3	1 daily
Melbourne–Sydney	486	DC3	1 daily

Operating Companies and Services.	Route Mileage.	Aircraft Used.	Frequency (Return Trips unless otherwise indicated).
MacRobertson-Miller Aviation Co. Ltd.—			
Perth–Broome	1,296	DC3	1 weekly
Perth–Carnarvon ..	508	DC3	1 weekly
Perth–Geraldton	230	Anson	1 weekly
Perth–Hedland (Coastal) ..	1,015	Anson	1 weekly
Perth–Derby	1,420 1,358	C47, LH10 ..	3 fortnightly
Perth–Katherine ..	2,405	LH10	1 fortnightly
Perth–Darwin	1,970	DC3	1 weekly
Derby–Kimberley Stations	928	LH10	1 fortnightly
Broome–Kimberley Stations	1,024	Anson	1 round trip weekly
Butler Air Transport Pty. Ltd.—			
Sydney–Charleville ..	669	DC3	2 weekly
Sydney–Dubbo	192	DC3	1 daily
Sydney–Coonamble ..	310	DH84	3 weekly
Sydney–Bega	209	DH84	6 weekly
Sydney–Pokolbin ..	101	DH84	6 weekly
Sydney–Tooraweenah ..	218	DC3	4 weekly
Bourke–Tooraweenah ..	242	DH84	4 weekly
Sydney–Bathurst.. ..	96	DC3	6 weekly
Sydney–Evans Head ..	360	DC3	1 daily
Sydney–Parkes	180	DC3	6 weekly
Connellan Airways—			
Alice Springs–Mount Irwin	493	DH90, DH84 ..	1 round trip fortnightly
Alice Springs–Huckitta ..	342	DH90, DH84 ..	1 round trip fortnightly
Alice Springs–Boroloola ..	2,022	DH90, DH84 ..	1 round trip fortnightly
Alice Springs–Wyndham ..	2,605	DH90, DH84 ..	1 round trip fortnightly
East-West Airlines—			
Tamworth–Sydney ..	199	Anson	3 weekly
Interstate Air Service Pty. Ltd.—			
Sydney–Jervis Bay ..	86	Anson	3 weekly
New England Airways—			
Sydney–Coff's Harbour ..	274	Anson	5 weekly
Sydney–Casino	374	Anson	3 weekly

6. **Air Ambulance Services.**—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

Air Ambulance Services were maintained during the war years by the Flying Doctor Services of Australia and the Bush Church Aid Society. The medical base at Wyndham, which was removed during the period of the war years to Hall's Creek, was re-established at Wyndham, but there being no civil air ambulance available at Wyndham, the co-operation of either MacRobertson-Miller Aviation Co. Ltd., Connellan Airways, or the Royal Australian Air Force is sought whenever transport of a patient is necessary.

During the period under review, the annual grant of £7,500 made by the Commonwealth Government, on the recommendation of a Departmental Committee comprising representatives of the Department of Health, Postmaster-General and Civil Aviation, was maintained.

7. **Training of Air Pilots.**—(i) *Subsidized Aero Clubs.* A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146.

During the war years, the facilities of all subsidized Aero Clubs, with the exception of Broken Hill and Spencer's Gulf, were used by the Royal Australiar Air Force for training purposes. The payment of subsidies to all Clubs, with the exception of the abovementioned Clubs, was discontinued during this period.

Towards the end of 1945, financial assistance to the Aero Clubs by the Government was resumed. The basis of payment is £25 for each 50 hours flown by each club aircraft with a maximum of £100 per aircraft per annum. In addition, a bonus of £50 and £10 is granted for each private pilot's licence issued and each pilot's licence renewed respectively. Bonuses of £60 and £12 10s. respectively where club members were trained at centres other than club head-quarters are paid also.

The Royal Aero Club of New South Wales, Royal Victorian Aero Club, Royal Queensland Aero Club, Royal Aero Club of South Australia, Royal Aero Club of Western Australia, Tasmanian Aero Club, Newcastle Aero Club and Broken Hill Aero Club are in receipt of assistance.

(ii) *Unsubsidized Aero Clubs.* These organizations ceased their activities during the war years. By 30th June, 1946, however, a number had resumed training activities subject to the limits imposed by the Liquid Fuel Restrictions.

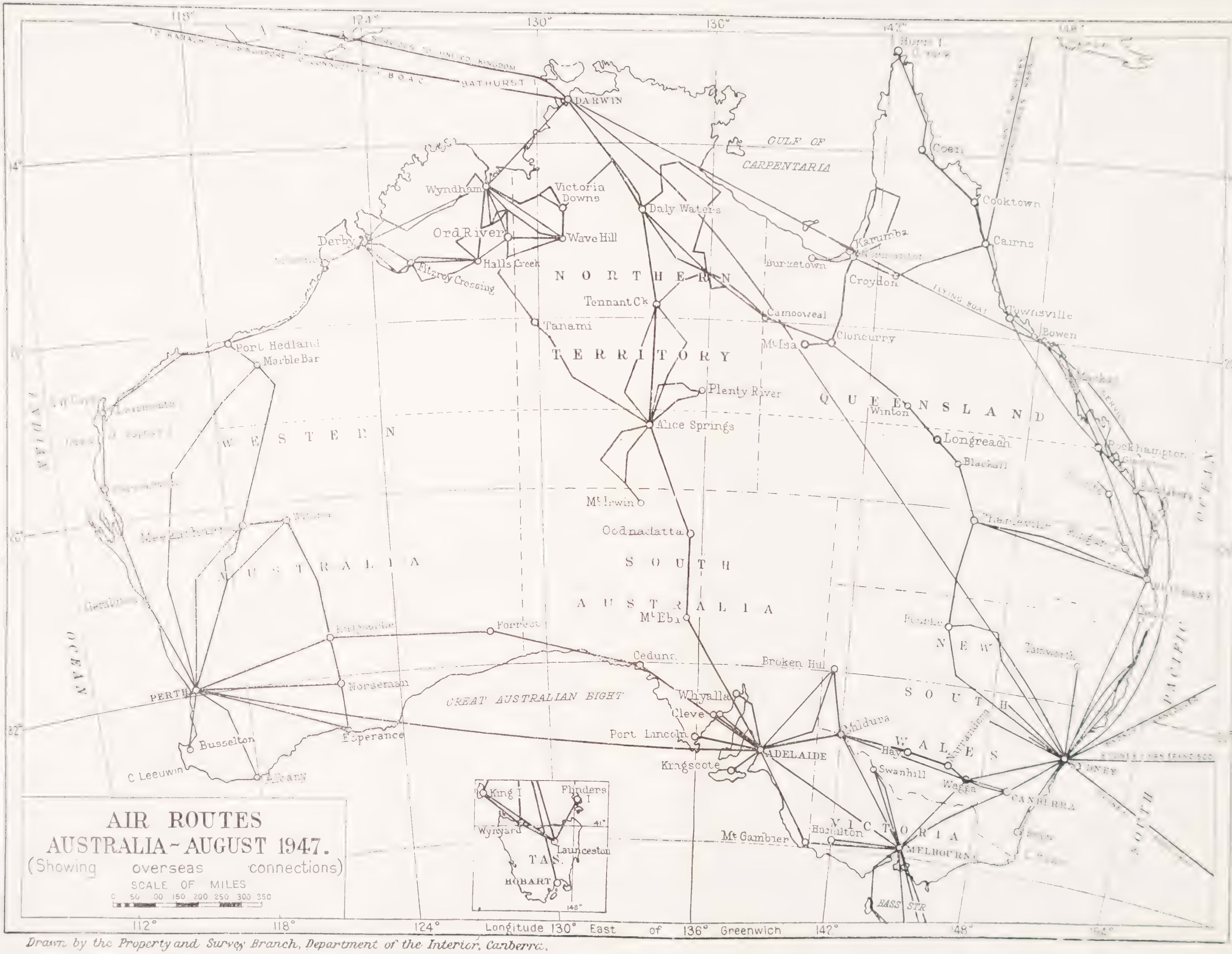
8. **Gliding.**—The subsidy which was granted by the Government to the gliding clubs was discontinued during the war years and has not been renewed.

9. **Airways Engineering.**—On the Australian mainland and in New Guinea an extensive network of radio communication and navigation stations has been established which completely encircles and crosses the continent and extends through New Guinea and Papua to Rabaul in New Britain. In the international sphere radio communication and navigation facilities are provided for aircraft entering Australia at Darwin and Sydney. The facilities now in use comprise—51 Aeradio Stations, 17 V.H.F. Radio Ranges, 43 Homers, 31 MF/DF Stations, 2 HF/DF Stations, 13 Radio-equipped Control Towers, and 4 Radio-equipped Control Launches.

There is published monthly by the Department of Civil Aviation a handbook entitled "ANFAC" in which are shown details of all communication and navigation aids available for aircraft flying in Australia and the South Pacific.

On the principal air routes high frequency radio range beacons provide a beam path for guidance of aircraft and at most stations radio homing beacons are installed for use in conjunction with the direction finding apparatus (radio compass) carried in the aircraft. These airway navigation facilities are backed up by a network of medium and high frequency direction finding stations, and to assist in the control of traffic using the busier airports ground radar stations are provided. In course of provision is an extensive network of V.H.F. 4-course radio range installations which will provide a more efficient "flying beam" service. These stations will be progressively modified to provide an omni-directional beam service, that is, one defining an infinite number of radial courses leading to the station location.

At all the principal airports, electrically operated runway lighting systems have been installed to define runways to be used for night landings. These installations are being extended both in scope and location. The later equipments, now being installed, have



AIR ROUTES
AUSTRALIA - AUGUST 1947.
(Showing overseas connections)

SCALE OF MILES
0 50 100 150 200 250 300 350
BATHURST I
DARWIN
GULF OF CARPENTARIA
Wyndham
Victoria Downs
Daly Waters
Ord River
Wave Hill
Derby
Halls Creek
Fitzroy Crossing
NORTHERN
TERRITORY
Tennant Ck
Tanami
Port Hedland
Marble Bar
Plenty River
Alice Springs
WESTERN
AUSTRALIA
Mt Irwin
Oodnadatta
SOUTH
AUSTRALIA
Mt Eba
Forrest
Ceduna
Norseman
PERTH
GREAT AUSTRALIAN BIGHT
Whyalla
Cleve
Port Lincoln
ADELAIDE
Kingscote
Busselton
C Leeuwin
Albany
Esperance
Broken Hill
Mildura
Hay
Swanhill
Narrandera
Wagga
CANBERRA
SYDNEY
Mt Gambier
Hamilton
VICTORIA
MELBOURNE
BASS STR
King I
Flinders I
Wynyard
Launceston
TAS.
HOBART
Coen
Cooktown
Cairns
Karumba
Burketown
Croydon
FLYING BOAT
Camooweal
Townsville
Bowen
Mt Isa
Cloncurry
QUEENSLAND
Winton
Longreach
Blackall
Rockhampton
Bourke
Tamworth
NEW
SOUTH
WALES
INDIAN
OCEAN
SOUTH PACIFIC OCEAN
Longitude 130° East of 136° Greenwich
112°
118°
124°
130°
136°
142°
148°
154°

Drawn by the Property and Survey Branch, Department of the Interior, Canberra.

the lighting fittings flush with the runway surface thus eliminating possible obstruction to aircraft and the light output is being directionally focussed to provide greater range of visibility in the desired direction.

10. **Air Traffic Control.**—With increasing aircraft traffic density at the principal aerodromes and on the main air routes a system of Air Traffic Control has been implemented to assist towards achieving safety of flight. The main services of the Air Traffic Control System are the Aerodrome Control Service and the Flight Control Service.

The Aerodrome Control Service operates from a specially constructed tower from which the entire aerodrome can be viewed. The aim of this service is to provide an orderly and safe system of arrivals and departures of aircraft to and from aerodromes. Radio communication equipment is provided in the control tower for communication with aircraft on the aerodrome and within the limited area of aerodrome control. The Flight Control Service is provided at the main aerodromes. Aircraft captains in co-operation with Flight Control Officers formulate flight plans and at regular intervals during flight, by means of radio communication with the aircraft, the Flight Control Service is able to determine at any time the estimated positions of all aircraft within the various areas of control. A Flight Control Centre is responsible for the supervision of all aerodrome controls within its area, the provision of a Flight Information Service and for initiating search and rescue procedures. The Flight Information Service provides air crews with complete information regarding the aerodromes and navigational and communication aids which may be used on any particular flight. Search and rescue assistance is provided mainly by the R.A.A.F.

11. **Meteorological Aids to Civil Aviation.**—Meteorological information and service are provided by the Meteorological Branch of the Commonwealth Department of the Interior.

12. **Airports and Landing Grounds.**—An account of the airports and landing grounds controlled and maintained by the Commonwealth Government will be found in Official Year Book No. 32, p. 148.

During the war period large numbers of aerodromes and landing grounds were constructed and maintained for defence purposes These aerodromes were mainly established at great distance from the centres of population and were not suitable for future civil aviation use. Those which can satisfactorily serve existing communities were taken over from the Royal Australian Air Force as they became surplus to requirements. To the 30th June, 1946, 35 such aerodromes had been transferred, and, in the future, a considerable number estimated to be valued at £7,000,000 will be taken over and directly controlled and maintained for civil aviation needs.

In order to bring landing grounds owned by municipal bodies or private persons to the required standards, technical assistance is provided by the Commonwealth Government for the planning of extensions or developments.

At the 30th June, 1946, there were 96 Government landing grounds, 73 emergency landing grounds, and 230 licensed public aerodromes within Australia.

13. **Construction of New Airports.**—During the war period improvements and developmental work were necessarily restricted to those airports and landing grounds required for defence purposes.

With the cessation of hostilities important developments were immediately planned for airports and landing grounds in Australia and New Guinea. With a view to the segregation of private and Aero Club flying from that of the regular transport services, the development of two airports is planned for each mainland capital city. In this manner congestion at major airports will be greatly reduced. Details of this scheme are as follows :—

Capital City.	Major Airport.	Minor Airport.
Sydney	Mascot	Bankstown
Brisbane	Eagle Farm	Archerfield
Adelaide	West Torrens	Parafield
Perth	Guildford	Maylands
Melbourne	Essendon	Site to be selected

Kingsford Smith Airport. After comprehensive investigation of all possible sites near Sydney, approval has been granted by the Government for the development of the existing Kingsford Smith Airport at Mascot to a combined land and water airport, conforming with international standards. The master plan of the aerodrome provides for four pairs of parallel runways, the longest being 10,000 feet and others between 5,000 and 8,000 feet complete with taxi strips, aircraft aprons, and parking facilities. The estimated cost of the first stage of the development programme is £5,000,000 and entails the diversion of Cook's river. The work proposed will extend over a period of from four to five years.

Essendon Airport. The first stage towards the development of a major airport at Essendon was nearing completion on 30th June, 1946. This stage consisted of the construction of a concrete runway 4,800 feet in length complete with taxiways and apron estimated to cost £300,000. Later stages of development will be carried out over the next four or five years.

14. **Aircraft Parts and Materials.**—The production of aircraft components and materials in Australia has increased considerably during recent years, so that most aircraft requirements can now be met by local production. One hundred and twenty-eight firms and organizations are authorized by the Department of Civil Aviation to issue release notes with their aircraft products, certifying that they have been manufactured to designs and specifications approved by the Department of Civil Aviation There are 48 distributors and agents approved by the Department of Civil Aviation who engage in the distribution of aircraft parts and materials, certifying their goods as being in conformity with approved specifications.

15. **Aircraft Maintenance, Certificates of Repair.**—All aircraft maintenance repair and overhaul is now carried out under the supervision of a works inspection section or licensed ground engineer, in workshops approved by the Department of Civil Aviation. Sixty-nine of these workshops are authorized to issue certificates of repair which serve as evidence to the licensed ground engineer responsible for the fitment of the part that the work so covered has been done in an authorized workshop by competent tradesmen and has been subjected to proper inspection. Such specialized work as the overhaul of instruments, electrical equipment, propellers, aeronautical pumps, and carburettors is carried out by these approved workshops.

16. **Test and Examination of Aircraft Parts and Materials.**—A number of laboratories has now been approved by the Department of Civil Aviation and is authorized to issue laboratory reports covering the physical test, chemical analysis, radiological and metallurgical examination of materials and parts used in connexion with the civil aircraft industry.

17. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by this Bureau as from 1st July, 1922. The following table gives a summary of operations for the year 1938–39 and the four years ended 30th June, 1946. Figures shown include particulars of Qantas Overseas Airways, but exclude particulars of the Trans-Tasman service. They exclude, as far as possible, the operations of aircraft chartered for defence purposes.

CIVIL AVIATION IN AUSTRALIA : SUMMARY.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Registered aircraft owners (*a*)	No.	149	119	116	125	182
Registered aircraft (*a*) ..	,,	296	187	185	206	349
Licensed pilots—(*a*)						
Private	,,	1,096	171	159	215	320
Commercial ..	,,	346	233	305	428	1,019
Licensed navigators (*a*)	,,	59	61	96	125	223
Licensed aircraft radio telegraph operators (*a*) ..	No.	75	69	111	160	401
Licensed aircraft radio telephone operators (*a*) ..	No.	..	53	64	140	238
Licensed gound engineers (*a*)	,,	525	924	1,039	1,122	1,220
Aerodromes—(*a*)						
Government ..	,,	71	69	69	77	96
Public	,,	213	207	206	230	230
Government emergency grounds ..	No.	147	96	78	83	73
Hours flown	,,	121,935	58,185	84,274	111,122	152,140
Approx. mileage	miles '000	14,099	7,517	10,082	14,992	21,538
Passengers carried—						
Paying	No.	123,566	130,878	232,161	337,195	515,347
Non-paying ..	,,	24,353	2,647	3,614	4,875	6,810
Total	,,	147,919	133,525	235,775	342,070	522,157
Freight carried ..	Tons	774.6	922.3	1,398.2	2,123.2	4,580.3
Mails, gross weight carried—						
Internal	,,	(*b*) 64.3	(*b*) 655.8	*b* 1,088.4	*b* 1,252.7	831.2
Oversea	,,	265.6	85.3	168.3	198.2	406.7
Total	,,	329.9	741.1	1,256.7	1,450.9	1,237.9
Accidents—						
Persons—killed ..	No.	38	4	1	26	44
injured ..	,,	15	3	1	10	1

(*a*) At 30th June. (*b*) Net weight.

Separate particulars of flying by Tasman Empire Airways over the Trans-Tasman route and by Qantas Empire Airways over the Indian Ocean and Singapore routes are shown below :—

CIVIL AVIATION : OVERSEA SERVICES.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Tasman Empire Airways Trans-Tasman Service—						
Hours flown ..	No.	(*a*)	1,272	1,818	2,864	3,278
Miles flown ..	,,		192,960	278,720	446,220	511,880
Passengers carried	,,		2,183	3,579	5,772	6,041
Freight carried	Tons		12.9	20.1	29.6	31.8
Mails carried	,,		44.1	43.5	75.2	98.2
Qantas Empire Airways—						
Hours flown ..	No.	4,903	(*b*)	5,042	8,105	15,168
Miles flown ..	,,	718,288		643,588	1,254,518	3,112,647
Passengers carried	,,	1,112		546	1,868	4,365
Freight carried	Tons	46.4		9.0	38.6	85.2
Mail carried ..	,,	257.2		39.3	160.9	287.4

(*a*) Service inaugurated with first trip on 30th April, 1940. (*b*) Service suspended.

18. **New Guinea Activities.**—Previous issues give particulars of the development of civil aviation in New Guinea, and of the operating companies at the outbreak of war with Japan.

The following table gives a summary of operations for the four years ended 30th June, 1941, and for the three months ended September, 1941.

CIVIL AVIATION IN TERRITORY OF NEW GUINEA: SUMMARY.

Particulars.		1937–38.	1938–39.	1939–40.	1940–41.	1941–42. (c)
Registered aircraft owners (a)	No.	10	10	9	11	1
Registered aircraft (a) ..	,,	40	47	43	41	3
Licensed pilots—(a)						
Private	,,	12	13	(b)	5	..
Commercial ..	,,	24	23	(b)	16	..
Licensed navigators (a)	,,	2	3	(b)	4	..
Licensed aircraft radio operators (a)	No.	..	1	1	2	..
Licensed ground engineers (a)	,,	37	46	(b)	37	6
Aerodromes—(a)						
Government ..	,,	21	24	30	40	..
Public	,,	19	19	23	18	..
Government emergency landing grounds ..	No.	6	11	13	17	..
Hours flown	,,	15,445	15,626	13,814	11,965	2,508
Approx. mileage	miles '000	1,560	1,456	1,254	1,095	216
Passengers carried—						
Paying	No.	12,247	12,909	15,433	12,995	2,919
Non-paying ..	,,	1,017	1,569	1,551	993	194
Total	,,	13,264	14,478	16,984	13,988	3,113
Freight carried ..	lb. '000	25,574	27,064	23,500	19,855	4,124
Mails carried	,, ,,	167	163	147	101	21
Accidents—						
Persons—killed ..	No.	1	..	8	2	..
injured ..	,,	1	1	1	1	..

(a) At 30th June. (b) Not available. (c) July to September, 1941 only. Further particulars not available.

I. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. General.

1. **The Commonwealth Postal Department.**—Under the provisions of the Commonwealth Post and Telegraph Act 1901, the Commonwealth Postal Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy-Director of Posts and Telegraphs.

The considerable expansion of postal business of all kinds is reflected in the gross revenue of the Department which in 1945–46 was 64 per cent. greater than in 1938–39.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) in each State and in Australia at 30th June, 1946. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account. In this and all succeeding tables the returns given for South Australia include those for the Northern Territory, and the returns for the Australian Capital Territory are included in those for New South Wales.

POSTAL FACILITIES : RELATION TO AREA AND POPULATION, AT 30th JUNE, 1946.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (*a*) ..	2,490	2,484	1,222	815	599	504	8,114
Number of square miles of territory to each office in State	124	35	549	1,109	1,629	52	367
Number of inhabitants to each office	1,189	815	892	792	823	500	920
Number of inhabitants per 100 square miles	954	2,305	162	71	50	961	251

(*a*) Includes "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices in each State for the years 1924, 1934, 1944 and 1946.

NUMBER OF POST OFFICES.

State.	At 30th June— 1924.		1934.		1944.		1946.	
	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.
New South Wales ..	460	2,183	436	2,013	468	2,027	462	2,028
Victoria	273	2,399	275	2,271	302	2,226	291	2,193
Queensland ..	215	1,044	186	1,016	216	1,026	201	1,021
South Australia ..	143	662	144	628	152	647	153	662
Western Australia ..	137	709	124	449	135	470	133	466
Tasmania ..	47	495	42	466	46	462	45	459
Australia ..	1,275	7,492	1,207	6,843	1,319	6,858	1,285	6,829

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at specified dates is given in the following table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

At 30th June—

State.	1924.		1934.		1944.		1946.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	100	..	202	..	579	..	538	..
New South Wales ..	13,947	1,791	13,220	1,953	22,171	2,537	23,488	2,511
Victoria	10,279	1,133	9,979	1,070	17,563	1,680	18,583	1,802
Queensland ..	6,220	819	4,908	1,209	8,830	1,355	9,362	1,535
South Australia ..	4,014	354	3,280	301	5,166	542	5,424	545
Western Australia ..	2,450	382	2,629	342	4,356	350	4,308	329
Tasmania ..	1,582	206	1,391	242	1,930	213	2,191	242
Australia ..	38,592	4,685	35,609	5,117	60,595	6,677	63,894	6,964

3. **Gross Revenue, Branches—Postmaster-General's Department.** The gross revenue (actual collections) in respect of each branch of the Department during each of the years 1942–43 to 1945–46 in comparison with 1938–39 is shown in the table hereunder :—

POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE.

Branch and Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Postal—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	3,048	2,042	1,067	552	502	211	7,422
1942–43 ..	3,936	2,761	1,686	900	657	262	10,202
1943–44 ..	4,047	3,062	2,031	1,001	720	302	11,163
1944–45 ..	4,222	3,195	2,259	1,021	736	321	11,754
1945–46 ..	4,454	3,425	1,935	930	790	344	11,878
Telegraph—							
1938–39 ..	502	341	234	118	139	38	1,372
1942–43 ..	874	959	540	216	233	38	2,860
1943–44 ..	962	949	724	251	221	41	3,148
1944–45 ..	1,030	1,022	639	223	225	47	3,186
1945–46 ..	1,173	901	738	216	234	59	3,321
Wireless—							
1938–39 ..	198	152	59	53	36	18	516
1942–43 ..	243	187	78	65	43	22	638
1943–44 ..	249	189	79	67	42	23	649
1944–45 ..	253	193	81	68	44	22	661
1945–46 ..	250	200	83	70	46	23	672
Telephone—							
1938–39 ..	3,261	2,352	1,098	696	431	202	8,040
1942–43 ..	4,129	3,243	1,454	969	610	286	10,691
1943–44 ..	4,645	3,434	1,699	988	656	298	11,720
1944–45 ..	4,825	3,620	1,805	1,031	677	313	12,271
1945–46 ..	5,003	3,703	1,838	1,052	661	327	12,584
All Branches—							
1938–39 ..	7,009	4,887	2,458	1,419	1,108	469	17,350
1942–43 ..	9,182	7,150	3,758	2,150	1,543	608	24,391
1943–44 ..	9,903	7,634	4,533	2,307	1,639	664	26,680
1944–45 ..	10,330	8,030	4,784	2,343	1,682	703	27,872
1945–46 ..	10,880	8,229	4,594	2,268	1,731	753	28,455
Total revenue per capita—	£	£	£	£	£	£	£
1938–39 ..	2.55	2.61	2.44	2.36	2.37	1.97	2.50
1942–43 ..	3.21	3.64	3.61	3.47	3.23	2.52	3.39
1943–44 ..	3.43	3.85	4.30	3.68	3.43	2.72	3.67
1944–45 ..	3.54	4.02	4.48	3.70	3.47	2.85	3.79
1945–46 ..	3.69	4.08	4.24	3.54	3.53	3.01	3.83

Compared with the corresponding figures for the previous year, an increase of 2.1 per cent. is shown in the gross revenue earned for the year 1945–46. Increases in the several branches were as follows :—Postal 1.1 per cent., Telegraph 4.2 per cent., Telephone 2.5 per cent. and Wireless 1.8 per cent.

The gross revenue in 1945–46 was 64.0 per cent. higher than in the last complete pre-war year, 1938–39, the corresponding percentage increases for the several branches being as follows :—Postal 60.0, Telegraph 142.1, Wireless 30.2, and Telephone 56.5.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of actual expenditure on various items in each State during the year ended 30th June, 1946. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

POSTMASTER-GENERAL'S DEPARTMENT : DISTRIBUTION OF EXPENDITURE, 1945-46.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	£'000.	£'000.	£'000.	£'000	£'000.	£'000.	£'000.	£'000.
Expenditure from Ordinary Votes—								
Salaries and payments in the nature of salary	85	4,137	2,745	1,523	870	642	329	10,331
General expenses ..	5	296	206	97	66	39	16	725
Stores and material ..	3	192	436	82	46	32	18	809
Mail services ..	(a)1,527	598	408	325	115	101	49	3,123
Engineering services (other than New Works)	160	2,072	1,626	847	434	388	203	5,730
Other services ..	123	..	..	..	..	..	..	123
Total	1,903	7,295	5,421	2,874	1,531	1,202	615	20,841
Rent, repairs, maintenance, fittings, etc.	..	51	66	28	17	13	6	181
Proportion of audit expenses	..	5	4	2	1	1	..	13
Other expenditure ..	..	8	10	..	..	16	..	34
New Works (*b*)—								
Telegraph, telephone and wireless	9	1,633	1,028	519	253	198	158	3,798
New Buildings, etc. ..	..	129	128	89	51	27	13	437
Other expenditure not allocated to States ..	(c) 3,706	..	..	..	..	..	..	3,706
Grand Total ..	(d)5,618	9,121	6,657	3,512	1,853	1,457	792	29,010

(*a*) Expenditure on air-mail services etc. (*b*) Includes expenditure from loan. (*c*) Particulars of apportionment to States not available. (*d*) Includes expenditure not apportioned to States.

A similar table for the year 1944–45 is contained in the *Transport and Communication Bulletin* No. 36, p. 50.

(ii) *Total* 1938–39, 1942–43 *to* 1945–46. The next table gives the actual payments made as shown by records kept for Treasury purposes in respect of the Postmaster-General's Department, for each of the years 1942–43 to 1945–46 compared with the year 1938–39 :—

POSTMASTER-GENERAL'S DEPARTMENT : EXPENDITURE.

——	1938–39	1942–43.	1943–44.	1944–45.	1945–46.
	£'000.	£'000.	£'000.	£'000.	£'000.
Total expenditure ..	18,874	22,841	25,415	27,389	29,010

The total expenditure increased by 5.9 per cent. during 1945–46 and was 53.7 per cent. higher in 1945–46 than in 1938–39.

5. **Profit or Loss, Postmaster-General's Department.**—(i) *States*, 1945–46. The foregoing statements of gross revenue and expenditure represents actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States, after providing for working expenses, depreciation and interest charges, including exchange, were as follows :—

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1945–46.

Branch.	Profit or Loss.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
		£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Postal ..	Profit ..	924	722	263	161	121	77	2,268
	Loss ..	..	..	..	..	..	..	..
Telegraph ...	Profit ..	344	195	302	74	70	11	996
	Loss ..	..	..	..	..	..	..	..
Wireless ...	Profit ..	..	..	..	9	..	..	..
	Loss ..	51	22	39	..	34	7	144
Telephone ..	Profit ..	1,416	964	436	178	71	..	3,058
	Loss ..	..	..	..	..	..	7	..
All Branches ..	Profit ..	2,633	1,859	962	422	228	74	6,178
	Loss ..	..	..	..	..	..	..	..

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1945–46 closed with a surplus of £6,177,624 compared with a surplus of £6,674,595 in 1944–45 and of £3,625,371 in 1938–39.

(ii) *Branches*, 1938–39 *and* 1942–43 *to* 1945–46. The following statement gives particulars of the operating results of each branch for the years 1938–39 and 1942–43 to 1945–46 :—

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.

Year.	Branch Profits—				
	Postal.	Telegraph.	Wireless.	Telephone.	All Branches.
	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39	2,105	52	76	1,392	3,625
1942–43	2,849	946	— 33	2,381	6,143
1943–44	2,336	952	— 24	3,033	6,297
1944–45	2,572	939	— 127	3,291	6,675
1945–46	2,268	996	— 144	3,058	6,178

NOTE.—Minus sign (—) represents deficit.

6. **Capital Account.**—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1945 to 30th June, 1946 :—

POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS.

Particulars.	Net Value, 1st July, 1945.	Capital Expenditure, 1945–46.	Gross Value, 30th June, 1946.	Less Depreciation, etc., 1945–46. (a)	Net Value, 30th June, 1946.
	£'000.	£'000.	£'000.	£'000.	£'000.
Telephone service plant (excluding trunk lines)	50,825	4,183	55,008	699	54,309
Trunk and telegraph service plant (aerial wires, conduits, and cables)	16,246	551	16,797	71	16,726
Telegraph service plant ..	732	119	851	30	821
Postal service plant	556	33	589	..	589
Wireless service plant	776	74	850	2	848
Sites, buildings, furniture and office equipment	12,753	482	13,235	61	13,174
Miscellaneous plant	1,757	432	2,189	116	2,073
Total	83,645	5,874	89,519	979	88,540

(a) Includes dismantled assets, depreciation written off, and assets transferred.

At 30th June, 1946, the net value of fixed assets was 35.9 per cent. greater than at 30th June, 1939 (£65,135,000).

§ 2. Posts.

1. **Postal Matters Dealt With.**—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the four years 1942–43 to 1945–46 in comparison with 1938–39. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the number dispatched is included in the following table, which consequently gives the number of distinct articles handled :—

POSTAL MATTER DEALT WITH : AUSTRALIA.

Year.	Letters, Postcards, and Letter-cards.		Newspapers and Packets.		Parcels.		Registered Articles other than Parcels.	
	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.								
1938–39 (a) ..	836,243	120,605	139,635	20,138	9,056	1,306	7,474	1,078
1942–43 ..	856,032	118,821	148,471	20,608	14,944	2,074	13,933	1,934
1943–44 ..	862,758	118,646	152,301	20,944	17,924	2,465	17,182	2,363
1944–45 ..	882,960	120,146	165,114	22,467	17,758	2,416	18,175	2,473
1945–46 ..	869,212	116,987	162,398	21,857	16,017	2,156	17,783	2,393
TOTAL POSTAL MATTER DEALT WITH.								
1938–39 (a) ..	903,090	130,245	165,362	23,849	9,585	1,382	8,371	1,207
1942–43 ..	887,798	123,230	163,578	22,705	16,014	2,223	14,280	1,982
1943–44 ..	907,768	124,836	170,044	23,384	18,945	2,605	17,524	2,410
1944–45 ..	932,143	126,839	184,860	25,154	18,956	2,579	18,682	2,542
1945–46 ..	942,402	126,838	185,598	24,980	19,345	2,604	18,800	2,530

(a) Packets were included with letters.

(ii) *States.* The next table shows the postal matter dealt with in each State during the year 1945–46.

POSTAL MATTER DEALT WITH : STATES 1945–46.(a)

State.	Letters, Postcards, and Letter-cards.		Newspapers and Packets.		Parcels.		Registered Articles other than Parcels.	
	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted)	Per 1,000 of Population.
	POSTED FOR DELIVERY WITHIN AUSTRALIA.							
New South Wales	338,521	114,822	71,315	24,189	6,132	2,080	7,556	2,563
Victoria ..	252,612	125,324	43,848	21,754	4,256	2,111	4,746	2,355
Queensland ..	118,275	109,108	22,926	21,149	3,026	2,791	2,686	2,478
South Australia ..	68,245	106,370	9,502	14,810	1,370	2,135	1,197	1,866
Western Australia	55,323	112,869	9,628	19,643	972	1,983	1,001	2,042
Tasmania ..	36,236	144,763	5,179	20,690	261	1,043	597	2,385
Australia ..	869,212	116,987	162,398	21,857	16,017	2,156	17,783	2,393
	POSTED FOR DELIVERY OVERSEAS.							
New South Wales	9,461	3,209	3,339	1,133	1,205	409	248	84
Victoria ..	7,635	3,788	3,339	1,657	900	447	52	26
Queensland ..	1,492	1,376	368	339	232	214	70	65
South Australia ..	3,574	5,571	324	505	184	287	12	19
Western Australia	1,615	3,295	834	1,702	255	520	21	43
Tasmania ..	3,137	12,532	20	80	78	312	4	16
Australia ..	26,914	3,622	8,224	1,107	2,854	384	407	55
	RECEIVED FROM OVERSEAS.							
New South Wales	24,600	8,344	8,082	2,741	120	41	351	119
Victoria ..	10,485	5,202	3,295	1,635	176	87	101	50
Queensland ..	6,768	6,243	1,069	986	109	101	98	90
South Australia ..	2,891	4,506	1,198	1,867	30	47	21	33
Western Australia	1,343	2,740	967	1,973	35	71	36	73
Tasmania ..	190	759	366	1,462	4	16	3	12
Australia ..	46,277	6,228	14,977	2,016	474	64	610	82

(a) See explanation in para. 1.—(i).

Comparable figures of the number of articles dealt with during 1944–45 may be found in the *Transport and Communication Bulletin* No. 37, pp. 52–55.

2. **Cash on Delivery Parcels Post.**—(i) *General.* The Postal Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcel post within Australia, or between Lord Howe Island, Norfolk Island, Nauru, the Territory

of Papua-New Guinea, or Fiji and Australia, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the cash on delivery parcels posted in each State for the years 1942–43 to 1945–46 in comparison with 1938–39 :—

CASH ON DELIVERY PARCELS POST : SUMMARY OF BUSINESS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
	No.	No.	No.	No.	No.	No.	No.
1938–39	332,419	36,000	175,376	20,596	67,852	849	633,092
1942–43	325,967	80,241	148,600	24,000	39,900	1,363	620,071
1943–44	359,500	79,100	147,200	28,400	36,400	1,300	651,900
1944–45	377,100	72,300	159,200	37,800	41,100	1,500	689,000
1945–46	401,900	53,500	192,200	41,800	48,000	1,500	738,900
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1938–39	405,844	50,224	226,409	22,962	76,323	1,143	782,905
1942–43	464,996	147,796	195,351	32,070	45,458	2,636	888,307
1943–44	518,268	154,896	223,106	44,849	48,645	2,351	992,115
1944–45	521,647	146,062	260,638	52,774	55,126	2,375	1,038,622
1945–46	691,019	113,484	317,918	69,284	64,108	2,498	1,258,311
REVENUE INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.							
	£	£	£	£	£	£	£
1938–39	45,097	4,867	24,881	2,587	8,207	102	85,741
1942–43	41,476	12,841	19,048	2,426	4,541	161	80,493
1943–44	49,283	13,575	19,135	4,566	4,225	151	90,935
1944–45	52,526	12,654	20,400	6,010	4,750	167	96,507
1945–46	54,220	8,635	25,598	6,019	5,526	177	100,175

The number and value of parcels forwarded in New South Wales and Queensland are much higher than in any of the other States, although the system has also found favour in South Australia and Western Australia. These States have the largest areas, and consequently more people at long distances from business centres avail themselves of the cash on delivery system.

3. **Sea-borne Mail Services.**—In earlier issues of this work particulars of sea-borne mail services were included, but the insertion of the information terminated with Official Year Book No. 22.

4. Total Cost of Carriage of Mails.—During 1944–45 and 1945–46 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows :—

CARRIAGE OF MAILS : TOTAL COST, 1944–45 AND 1945–46.

Year.	Inland Mails.			Coastwise Mails.	Overseas Mails.		Total.
	Road.	Railway.	Air.		Sea.	Air.	
	£	£	£	£	£	£	£
1944–45 ..	748,984	718,111	1,597,324	17,253	87,953	74,719	3,244,344
1945–46 ..	790,447	706,339	1,152,989	15,921	109,034	350,485	3,125,215

5. Transactions of the Dead Letter Offices.—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, interstate and international, dealt with by the Dead Letter Offices in 1945–46 and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES : TRANSACTIONS, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Letters, Postcards and Letter-cards.							
	No.	No.	No.	No.	No.	No.	No.
Returned to writers or delivered ..	773,972	311,814	443,476	101,296	95,539	47,459	1,773,556
Destroyed in accordance with Act ..	103,517	47,666	25,892	16,508	13,155	8,107	214,845
Returned to other States or countries as unclaimed ..	36,731	16,317	12,032	2,545	5,238	3,367	76,230
Total ..	914,220	375,797	481,400	120,349	113,932	58,933	2,064,631
Packets and Circulars.							
Returned to writers or delivered ..	109,275	71,228	183,190	5,246	525	10,884	380,348
Destroyed in accordance with Act ..	36,355	43,463	19,363	2,831	500	4,713	107,225
Returned to other States or countries as unclaimed ..	3,009	1,726	506	529	15	512	6,297
Total ..	148,639	116,417	203,059	8,606	1,040	16,109	493,870
Grand Total (letters, packets, etc) ..	1,062,859	492,214	684,459	128,955	114,972	75,042	2,558,501

During 1944–45 and 1945–46 money and valuables to the amount of £139,483 and £213,439 respectively were found in postal articles sent to the Dead Letter Office.

6. Money Orders and Postal Notes.—(i) *General.* The issue of money orders and postal notes is regulated by Sections 74–79 of the Post and Telegraph Act 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States*, 1945–46. Particulars regarding the business transactions in each State for 1945–46 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1945–46.

State	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Issued.	Poundage Received on Postal Notes.
	£'000.	£'000.	£	£'000.	£
New South Wales ..	12,227	12,597	57,860	3,579	75,498
Victoria	5,862	6,450	27,882	2,645	62,578
Queensland.. ..	4,512	4,012	21,105	1,625	19,806
South Australia ..	1,620	1,599	8,099	672	14,513
Western Australia ..	1,765	1,663	9,471	451	9,667
Tasmania	1,065	953	4,536	206	5,003
Australia ..	27,051	27,274	128,953	9,178	187,065

(iii) *Australia*, 1938–39, 1942–43 *to* 1945–46. The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1942–43 to 1945–46 compared with 1938–39 :—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	'000.	£,000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1938–39 ..	3,239	18,349	3,254	18,548	21,942	7,926	21,966	7,934
1942–43 ..	3,798	27,712	3,802	27,744	21,263	8,936	20,982	8,778
1943–44 ..	3,609	29,945	3,627	29,987	21,865	9,432	21,793	9,453
1944–45 ..	3,545	27,020	3,427	27,123	22,727	9,554	22,562	9,493
1945–46 ..	3,508	27,051	3,530	27,274	22,614	9,178	22,622	9,228

(iv) *Classification of Money Orders Issued and Paid.* (*a*) *Money Orders Issued.* The next table shows the number and value of money orders issued during 1944–45 and 1945–46, classified according to the country where payable :—

MONEY ORDERS ISSUED : COUNTRY WHERE PAYABLE, 1944–45 AND 1945–46.

Where Issued.		Where Payable.				Total.
		Australia.	New Zealand.	United Kingdom.	Other Countries.	
		1944–45.				
Australia ..	No.	3,487,268	13,694	32,851	10,846	3,544,659
	Value £	26,882,479	31,272	77,248	28,722	27,019,721
		1945–46.				
Australia ..	No.	3,447,602	14,220	34,540	11,752	3,508,114
	Value £	26,905,166	31,469	81,607	32,324	27,050,566

(b) *Money Orders Paid.* The number and value of money orders paid during 1944–45 and 1945–46, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID : COUNTRY OF ISSUE, 1944–45 AND 1945–46.

Where Paid.		Where Issued.				Total.
		Australia.	New Zealand.	United Kingdom.	Other Countries.	
		1944–45.				
Australia ..	No.	3,373,666	18,179	19,906	14,835	3,426,586
	Value £	26,849,371	39.649	133,049	100,642	27,122,711
		1945–46.				
Australia ..	No.	3,447,916	19,519	43,014	19,927	3,530,376
	Value £	26,791,592	44,366	273,749	164,054	27,273,761

In the tables above, money orders payable or issued in foreign countries, which have been sent from or to Australia through the General Post Office in London, are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1944–45 and 1945–46. Particulars regarding the number and value of postal notes issued and paid in each of the last five years have been given in an earlier table.

POSTAL NOTES PAID : STATE OF ISSUE, 1944–45 AND 1945–46.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	1944–45.						
Same State No. '000	7,124	3,725	2,105	957	882	429	15,222
Value £'000	2,998	1,508	896	402	354	151	6,309
Other States No.'000	1,559	1,066	639	218	322	3,536	7,340
Value £'000	892	623	298	133	128	1,110	3,184
Total No. '000	8,683	4,791	2,744	1,175	1,204	3,965	22,562
Value £'000	3,890	2,131	1,194	535	482	1,261	9,493
	1945–46.						
Same State No. '000	7,234	3,876	2,052	913	882	437	15,394
Value £'000	3,066	1,552	850	370	353	156	6,347
Other States No.'000	1,284	943	582	192	331	3,896	7,228
Value £'000	698	513	231	114	108	1,217	2,881
Total No. '000	8,518	4,819	2,634	1,105	1,213	4,333	22,622
Value £'000	3,764	2,065	1,081	484	461	1,373	9,228

§ 3. Telegraphs.

1. **General.**—(i) *Development of System.* A review of the development of the Telegraph Services in Australia appears in Official Year Book No. 15, p. 625. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive reorganization.

(ii) *External Circulation or Routing of Traffic.* The external circulation system of the Australian telegraph service has been considerably modified, direct communication having been established between cities and towns which formerly were served through intermediate repeating centres. The reorganization has eliminated the loss of time in transit, improved the grade of service, and led to economy as regards the labour formerly required in manual re-transmission. As a result of the reorganization there are now only four repeating centres, nineteen centres having been abolished.

(iii) *Supra-Acoustic Carrier Wave System.* This system, which permits a number of messages to be transmitted simultaneously over the one pair of wires, is in operation between Perth and Adelaide, Adelaide and Melbourne, and Melbourne and Sydney, but has been superseded in recent years, to a great extent, by voice frequency telegraph carrier wave systems.

(iv) *Voice Frequency Telegraph Carrier Wave System.* This system, which enables a number of telegraph channels to be superposed on a single telephone channel by employing frequencies from 420 to 2,460 cycles per second, was introduced between Sydney and Tamworth during 1935. Between these two points 18 duo-directional channels were provided by adopting the voice-frequency principle, equivalent to 9,360 miles of uni-directional channels. This system has been extended to all the principal interstate and intra-State routes and 737,000 miles of uni-directional voice frequency telegraph carrier wave channels are now in operation.

(v) *Direct Telegraph Communication over Great Distances.* The telegraph system in Australia provides direct communication between many places separated by great distances as indicated in the following examples :—Sydney-Perth, 2,708 miles ; Perth-Wyndham, 1,933 miles ; Brisbane-Thursday Island, 1,775 miles ; Melbourne-Brisbane, 1,234 miles ; Brisbane-Cairns, 1,056 miles ; Brisbane-Cloncurry, 1,215 miles ; Adelaide-Perth, 1,642 miles ; Melbourne-Perth, 2,225 miles ; Adelaide-Darwin, 1,940 miles ; and Sydney-Adelaide, 1,066 miles. These direct channels provide a speedy service between the centres named, the average time involved in the transmission of a telegram being ten minutes.

(vi) *Machine Telegraphy.* In order to speed up transmission, machine printing telegraph systems have been introduced between capital cities and between important country centres. Murray multiplex machine apparatus is in operation between Sydney and Melbourne, Sydney and Brisbane, Sydney and Adelaide, Sydney and Perth, Sydney and Canberra, Sydney and Lismore, Sydney and Newcastle, Sydney and Wagga Wagga, Melbourne and Brisbane, Melbourne and Adelaide, Melbourne and Perth, Melbourne and Canberra, Adelaide and Perth, Brisbane and Rockhampton, and Brisbane and Townsville. These provide telegraph outlets which permit the carriage of very heavy loads with a minimum transit time. The operation of the apparatus has been steadily improved, and the system now gives a high output. Start-stop telegraph printing systems are in operation between Melbourne and Mildura, Melbourne and Hobart, Melbourne and Launceston, Sydney and Tamworth, Brisbane and Toowoomba, Brisbane and Mackay, Brisbane and Canberra, Perth and Fremantle, Perth and Kalgoorlie, Adelaide and Darwin, Hobart and Launceston, as well as between outlying centres and the large metropolitan and provincial offices.

(vii) *Phonogram Service.* Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1946, was 5,984,061 or 16.6 per cent. of the total lodgments, and the popularity of this service is growing.

(viii) *Radiograms within Australia.* On 1st May, 1929, the rates for radiograms between Flinders Island, Wave Hill, Brunette Downs and other places within Australia were reduced to 1½d. per word with a minimum charge of two shillings. Communication at these rates was extended to Lord Howe Island in August, 1929.

(ix) *Pedal Wireless Stations.* A number of privately operated wireless transceiver stations has been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Flying Doctor Service of Australia communicate by wireless with base stations established at Port Hedland, Cloncurry, Kalgoorlie, Broken Hill, Hall's Creek, Meekatharra and Alice Springs. Base stations which are operated by other enterprises are located at Yunta, Nonning, Port Lincoln and Wynyard. The radiogram rates of 1½d. per word with a minimum charge of two shillings apply to telegrams exchanged with these stations.

(x) *Picturegram Service* During the year ended 30th June, 1941, 351 picturegrams were transmitted between Sydney and Melbourne, the revenue being £862. Any kind of picture or document may be accepted for transmission, the charges varying from 30s. to 67s. 6d. according to the size of the picture or document and the grade of transmission desired. This service was suspended during September, 1942, but it will be restored as soon as the necessary equipment is obtained.

(xi) *Oversea Phototelegram Service.* An oversea phototelegram service, "via Beam," was inaugurated in October, 1934, permitting the transmission in either direction of facsimiles between Sydney or Melbourne and England, of dimensions up to a maximum of ten inches by seven inches. The tariff for this service was reduced on 1st January, 1940, and the charges are now calculated at the rate of one shilling and four pence per square centimetre with a minimum charge of £10 as for 150 square centimetres.

(xii) *Ornamental Telegram Forms.* The appropriately designed telegram forms used for conveying Christmas and new year greetings increased in popularity year by year until 1942 when all ornamental telegram forms and envelopes were withdrawn. In 1940, 453,886 of these greetings telegrams were sent, an increase of 214.9 per cent. on the number (144,102) sent in 1929, the year of inception of the service.

During 1933-34 telegram forms of special design and attractive colouring in connexion with Mothers' Day messages, birthday greetings and congratulatory telegrams were placed at the disposal of the public. The popularity of these facilities is indicated by the increase in the number of Mothers' Day telegrams from 16,091 in 1934 to 84,713 in 1941. Complete statistics are not available in respect of birthday greetings and congratulatory messages, but it is estimated that the number of telegrams in these categories is approximately 750,000 annually. In 1936 two additional greeting facilities employing ornamental telegram stationery were introduced, one for the conveyance of social greetings and the other for use during Easter-tide. The number of Easter Greeting telegrams in 1935, prior to the introduction of the special form for the occasion, was 4,164. This figure increased to 23,062 in 1941. Extensive use has been made of the social telegram service, which is popular for conveying "bon voyage" greetings and for making social engagements. The decorative telegraph stationery will be re-introduced as soon as the paper supply position will permit.

In December, 1945 the embargo on Christmas, New Year and Mother's Day greeting telegrams was removed.

(xiii) *Private Wire Teleprinter and Printergram Services.* In conformity with its policy of placing at the service of the public new developments in communication, the department introduced the teleprinter service in 1933. This may be briefly defined as typewriting over electrical circuits, teleprinters being similar in performance to typewriters, except that the keyboard and distant printer are electrically connected by means of a telegraph line.

This facility combines the speed of the telegraph and the flexibility and personal touch of the telephone with the accuracy and permanency of the printed word. It affords the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles. Communications are automatically produced at both ends exactly as sent, and information may be dispatched with the utmost privacy even in exposed situations where other means are unsuitable. It affords two-way communications at speed up to 60 words a minute.

Printergram services connecting any business premises with the local telegraph office for the transmission and reception of telegrams are also available. This saves time and labour, while providing a permanent record of each transaction.

Two hundred and sixty-four private wire services utilizing more than 100,000 unidirectional channel miles of communication links were in use at the 30th June, 1946.

Two extensive interstate teletype networks were provided during the year ended June, 1946. One was provided for a civil aviation undertaking whose network comprised a service with connecting offices of the company in all States, and the second for a press association connecting the Melbourne office of the company with the offices of similar newspapers and the broadcasting undertakings in all States.

(xiv) *Telegraph Tariffs.* Important modifications of the telegraph tariff structure were introduced on 10th June, 1940. Under the amending Post and Telegraph Rates Act 1940 ordinary telegrams between offices not more than 15 miles apart are subject to a minimum charge of 9d. for 14 words and 1d. for each additional word, irrespective of whether the telegraph offices of origin and destination are in the same State. Ordinary telegrams between offices which are more than 15 miles apart are subject to a uniform charge of 1s. as for 14 words and 1d. for each additional word, irrespective of State boundaries. Double rates are applicable to urgent telegrams. Ordinary charges, instead of double rates as previously, are applied to ordinary telegrams lodged for transmission on Sundays, Christmas Day, Good Friday or after certain hours on other days. The prescribed press rates have also been extended to telegrams containing news intended for broadcasting.

2. **Telegraph Offices—Number.**—The following table shows the number of telegraph offices in each State during the years 1944–45 and 1945–46 :—

TELEGRAPH OFFICES : NUMBER.

Year ended 30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
1945 ..	3,079	2,424	1,715	858	912	535	9,523
1946 ..	3,054	2,404	1,676	853	901	538	9,426

3. **Telegraphs and Telephones—Length of Wire.**—The following table shows for the year ended June, 1946, the combined single wire mileage for both telegraph and telephone purposes in each State. The lengths of conduits and pole routes are also shown.

TELEGRAPHS AND TELEPHONES : MILEAGES, 1945–46.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
Cables—							
Exchange aerial, underground and submarine .. single wire miles '000	1,190	904	325	249	167	62	2,897
Trunk telephone and telegraph—							
Aerial and underground single wire miles '000	36	49	5	8	8	2	108
Submarine .. ,, ,,	1	(a)	(a)	(a)	(a)	(a)	1
Total .. ,, ,,	1,227	953	330	257	175	64	3,006
Conduits .. duct miles '000	7	5	2	1	1	(a)	16
Aerial wires—							
Telephone, trunk and/or telegraph purposes .. single wire miles '000	131	86	107	67	45	15	451
Exchange and non-exchange service lines .. single wire miles '000	166	126	71	69	29	19	480
Total .. ,, ,,	297	212	178	136	74	34	931
Pole routes .. total miles '000	32	19	15	16	12	4	98

(a) Less than 500.

4. **Number of Telegrams Dispatched.**—(i) *States.* The following table shows the number of telegrams dispatched in each State during 1945–46 according to the class of message transmitted :—

TELEGRAMS DISPATCHED(a) : STATES, 1945–46.

Class of Message Transmitted within Australia.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	'000.	'000.	'000.	'000.	'000.	'000.	'000.
Paid and Collect—							
Ordinary ..	10,444	7,479	5,418	2,347	2,822	692	29,202
Urgent ..	1,282	530	625	159	169	41	2,806
Press	178	102	66	20	39	38	443
Lettergram ..	33	26	23	13	29	7	131
Radiogram ..	25	3	24	20	23	4	99
Total ..	11,962	8,140	6,156	2,559	3,082	782	32,681
Unpaid—							
Service ..	249	125	121	45	61	27	628
Meteorological ..	645	320	639	499	417	142	2,662
Total ..	894	445	760	544	478	169	3,290
Grand Total ..	12,856	8,585	6,916	3,103	3,560	951	35,971

(a) Includes radiogram traffic with islands adjacent to Australia and to ships at sea.

A comparative table for the year 1944–45 may be found in the *Transport and Communication Bulletin* No. 36, p. 58.

(ii) *Australia.* The number of telegrams dispatched to destinations within Australia during each of the years 1938–39 and 1942–43 to 1945–46 was .—

TELEGRAMS DISPATCHED : AUSTRALIA.

Telegrams.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number (*a*) ... '000	17,252	29,570	33,357	35,474	35,971

(*a*) See Note (*a*) above.

The volume of telegraph business has increased by over 108 per cent. since the year 1938–39.

§ 4. Oversea Cable and Radio Communication.

1. **First Cable Communication with the Old World.**—In earlier issues of the Official Year Book will be found a detailed account of the connexion of Australia with the Old World by means of submarine cables. (See No. 6, p. 770.)

2. **General Cable Service.**—Descriptions of the various cable services between Australia and other countries are given in Official Year Book No. 22, pp. 335–6.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the beam wireless with the cable services, the Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. For further developments, leading eventually to the establishment of the Overseas Telecommunications Commission, see Section 6. Radio Telegraphy and Telephony, paragraph (iv).

4. **Oversea Cable and Radio Traffic.**—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1945–46 is given hereunder :—

INTERNATIONAL TELEGRAMS : STATES, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land	S Aust.	W. Aust.	Tasmania.	Australia.
Number received ..	571,607	296,487	65,437	34,616	46,775	8,967	1,023,889
,, dispatched	564,234	284,646	77,284	37,990	70,121	11,327	1,045,602
Total ..	1,135,841	581,133	142,721	72,606	116,896	20,294	2,069,491

(ii) *Australia.* The following table shows the number of international telegrams received from and dispatched overseas in Australia during the years 1938–39 and 1942–43 to 1945–46 :—

INTERNATIONAL TELEGRAMS : AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number received ..	716,007	1,281,792	1,098,606	979,237	1,023,889
,, dispatched ..	745,754	1,682,940	1,363,588	1,116,050	1,045,602
Total ...	1,461,761	2,964,732	2,462,194	2,095,287	2,069,491

5. **Cable and Beam Wireless Rates.**—(i) *Ordinary Messages.* As from 25th April, 1938, the Cable and Beam Wireless rates per word for telegrams exchanged between Australia and British Empire Countries were reduced to the following levels :—Urgent, 2s. 6d. ; Ordinary, 1s. 3d. ; C.D.E. (5 letter code), 10d. (minimum 5 words) ; Deferred, 7½d. ; (minimum 5 words) ; Daily Letter Telegram, 5d. (minimum charge 10s. 5d. as for 25 words). Where, however, the charges between Australia and certain Empire countries (e.g., New Zealand, Fiji and some Pacific Islands) were below these levels, the rates were unaltered. No change was effected in the rates for traffic exchanged between Australia and foreign countries.

The following are the ordinary rates at present operating in regard to traffic with the principal countries, other than members of the British Empire :—

INTERNATIONAL TELEGRAM RATES.

To—	Rate per Word and Route.	
	Via Cable.	Via Beam.
European Countries	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries	2s. 5d. to 4s. 7d.	..
Africa	2s. 6d. to 5s. 6d.	2s. 2½d. to 2s. 11d.
United States of America	2s. 1½d. to 2s. 5d.	2s. 1½d. to 2s. 5d.
Central America	3s. 2½d. to 4s. 4½d.	2s. 11½d. to 4s. 4½d.
West Indies	3s. 0d. to 5s. 1d.	2s. 8½d. to 4s. 11d.
South America	3s. 9d. to 5s. 9d.	3s. 8d. to 5s. 2½d.

(ii) *Deferred Telegrams* (*via Cable or Beam*). Under this system a reduction of 50 per cent. in the ordinary charge for international telegrams is made under certain conditions. Deferred telegrams are transmitted after ordinary rate telegrams and ordinary press telegrams have been disposed of.

(iii) *Daily Letter Telegrams.* The daily letter telegram service was inaugurated in September, 1923, between Australia and Great Britain and Canada, later being extended to most countries in the British Empire and in Europe, to the United States of America and to certain other places. The charges are based on one-third of the tariff per word for ordinary messages, subject to a minimum charge as for 25 words. These messages are delivered on the morning of the second day following that of lodgment.

(iv) *Night Letter Telegrams.* A night letter telegram service was introduced between Australia and New Zealand on 1st May, 1924, and was extended to Fiji on 1st December, 1924. The minimum charge for messages is fixed as for 25 words, the rates being—to New Zealand, 3s. 9d. minimum, 2d. for each additional word beyond 25 ; Suva, 5s. 10d. minimum, 3d. for each additional word ; other places in Fiji, 7s. 4d. minimum and 4d. for each additional word. Night letter telegrams are delivered on the morning following the day of lodgment.

(v) *Oversea Press Telegrams.* The rate on ordinary press telegrams exchanged with Great Britain prior to 15th April, 1939, was 4d. per word and on deferred press 3d. per word. As from this date a uniform tariff of 2¼d. a word is applied uniformly to all Empire countries except Sudan. In all cases where the reduced rate applies the deferred press service has been abolished.

(vi) *Social Greetings Telegram Service.* As from 1st May, 1939, a social greeting service was introduced between Australia and Empire points.. The minimum charge for messages is 5s. for thirteen words, the indicator GLT being counted and charged for as one word. A charge of 5d. is made for each additional word. The text of such telegrams is restricted to messages of a social and greeting character. This service replaces the special Christmas, Easter and Jewish New Year greeting telegram service previously available to Empire points. These facilities are also available, on payment of the prescribed rates, to foreign countries which admit the service.

(vii) *De-Luxe Telegram Service.* A de-luxe telegram service was established between Australia and certain of the more important oversea countries in 1937. On payment of an additional fee of sixpence per telegram, the message will be delivered to the addressee on an ornamental form enclosed in a decorative envelope. This service, which was suspended during the late war, has not yet been restored.

(viii) *Radio-telegrams.* The prohibition of radio-telegrams to and from merchant ships, which was introduced on the outbreak of the late war on security grounds, was withdrawn as from 1st January, 1946.

§ 5. Telephones.

1. **Telephone Services.**—(i) *Mileage in Australia.* Particulars of the total mileage of lines used exclusively for telephone purposes are not now available, but are combined with all other line mileage. A table showing the total single wire mileage used for telephone trunk and/or telegraph purposes is shown in § 3 on page 210.

(ii) *Comparison with Other Countries.* During 1945–46 the total number of telephones added to the post office system was 28,055 compared with 28,133 in 1944–45. With an average of 125 telephones per 1,000 of population, Australia continues to hold a high place amongst the countries of the world in respect of telephone density. In February, 1942, restrictions were introduced on the provision of telephone facilities, unless required by the fighting services, organizations concerned actively with public defence, security or welfare, or persons engaged in the production and distribution of vital foodstuffs.

(iii) *Trunk Line System.* Twenty-five carrier wave telephone systems were installed during 1945–46 on trunk line routes serving capital cities and important provincial centres. The number of carrier systems now in service totals 266 representing a channel mileage of 171,087.

Special attention has been given to the provision of additional trunk line facilities between the capital cities, and 25 extra channels were provided between Sydney and Melbourne, 12 between Sydney and Brisbane, 13 between Melbourne and Adelaide, and 2 between Adelaide and Perth.

New 3-channel systems were installed between the following centres, Sydney–Kempsey, Parkes–Dubbo, Melbourne–Wangaratta, Melbourne–Horsham, Brisbane–Dalby, Brisbane–Bundaberg, Adelaide–Naracoorte, Adelaide–Yorketown, Adelaide–Berri, Adelaide–Whyalla, Adelaide–Mt. Gambier and Hobart–Launceston.

Satisfactory progress is being made with the installation of additional carrier units between the mainland and Tasmania, Melbourne, and Canberra and Sydney and Canberra.

(iv) *Automatic Exchanges.* The plan to convert the manual exchanges in the metropolitan networks to automatic working could not be implemented to any great extent during the year ended June, 1946, owing to interruption to deliveries of automatic exchange equipment which had been on order for long periods, the difficulties associated with the erection of new buildings to accommodate the apparatus, and the shortage of skilled man power. Consequently five only of this type of exchange were installed during the year ended June, 1946.

At the 30th June, 1946, there were 129 automatic exchanges in the metropolitan area and 160 in the country districts to which 503,518 telephones were connected representing 59 per cent. of the total number in use in Australia.

(v) *Rural Automatic Exchanges.* The establishment of automatic switching units which have been designed to meet the special needs of rural communities was also retarded by the effects mentioned above with the result that one new exchange only was provided during 1945–46.

There were 152 of these units in service at the end of June, 1946, and work is proceeding to enable many more additional exchanges to be established in the near future. Post-war plans provide for an additional 400 units to be installed in country areas.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1945 and 1946, compared with 1939 will be found in the following table :—

TELEPHONE SERVICES : SUMMARY.

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
		No.	No.	No.	No.	No.	No.	No.
Exchanges ..	1939	2,010	1,680	1,053	579	653	358	6,333
	1945	2,027	1,674	1,090	592	643	354	6,380
	1946	2,034	1,668	1,092	601	639	357	6,391
Telephone Offices (including Exchanges)	1939	3,040	2,358	1,517	829	907	509	9,160
	1945	3,106	2,398	1,565	860	909	507	9,345
	1946	3,053	2,393	1,520	889	901	501	9,257
Lines connected ..	1939	189,915	150,570	61,650	45,224	26,032	14,144	487,535
	1945	225,832	181,685	72,622	51,266	29,446	16,926	577,777
	1946	236,943	190,507	77,821	53,126	31,438	17,640	607,475
Instruments connected	1939	257,246	208,230	82,226	60,451	35,830	18,013	661,996
	1945	320,198	264,013	106,872	71,710	42,934	22,135	827,862
	1946	332,463	272,147	109,482	73,529	45,120	23,176	855,917
(i) Subscribers' instruments	1939	250,511	203,668	79,293	58,512	34,380	17,098	643,462
	1945	311,851	258,058	103,012	69,481	41,147	21,153	804,702
	1946	323,965	266,021	105,656	71,257	43,322	22,163	832,384
(ii) Public telephones	1939	4,223	2,573	1,775	1,017	926	562	11,076
	1945	5,032	3,069	2,145	1,106	925	552	12,829
	1946	5,043	3,066	2,050	1,119	905	560	12,743
(iii) Other local instruments	1939	2,512	1,989	1,158	922	524	353	7,458
	1945	3,315	2,886	1,715	1,123	862	430	10,331
	1946	3,455	3,060	1,776	1,153	893	453	10,790
Instruments per 100 of population	1939	9.32	11.09	8.08	10.03	7.62	7.59	9.50
	1945	10.91	13.15	9.92	11.24	8.80	8.90	11.20
	1946	11.23	13.44	10.05	11.39	9.16	9.20	11.46
		£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Earnings	1939	3,371	2,409	1,136	709	450	209	8,284
	1945	4,999	3,685	1,869	1,050	691	320	12,614
	1946	5,238	3,791	1,901	1,085	680	338	13,033
Working expenses ..	1939	2,119	1,488	691	543	365	204	5,410
	1945	2,969	2,187	1,184	704	494	258	7,796
	1946	3,294	2,444	1,274	781	533	307	8,633
		%	%	%	%	%	%	%
Percentage of working expenses on earnings	1939	62.87	61.75	60.80	76.58	81.13	97.94	65.31
	1945	59.38	59.36	63.37	67.12	71.47	80.42	61.81
	1946	62.89	64.47	67.00	71.97	78.39	90.84	66.24

Of the total telephones (855,917) in service on 30th June, 1946, 314,382 or 36.7 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks. The number of telephone offices, including exchanges, decreased by 88 during the year 1945–46, bringing the total in Australia to 9,257.

(vii) *Subscribers' Lines and Calling-rates.* The next table gives the number of subscribers' lines and daily calling-rate at central, suburban and country telephone exchanges in the several States for 1945–46 :—

TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING-RATE, 1945–46.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.	
	Sub-scribers' Lines.	Average Outward Calls Daily per line.	Sub-scribers' Lines.	Average Outward Calls Daily per line.	Sub-scribers' Lines.	Average Outward Calls Daily per line.
	No.	No.	No.	No.	No.	No.
New South Wales ..	23,981	11.90	129,467	4.66	83,495	2.65
Victoria	13,959	9.73	109,191	3.94	60,267	1.90
Queensland.. ..	9,101	10.95	25,129	4.17	37,322	2.94
South Australia ..	6,635	9.64	24,360	2.90	20,307	1.76
Western Australia ..	7,179	8.45	11,783	4.51	10,802	2.20
Tasmania	3,971	5.57	2,510	2.89	10,533	2.50

Similar information for the year 1944–45 may be found in the *Transport and Communication Bulletin* No. 36, p. 62.

A comparison of the average daily calling-rates for each class of exchange shows that New South Wales registered the greatest number of calls per line at central and suburban exchanges and Queensland at country exchanges.

(viii) *Effective Paid Local Calls.* The numbers of effective paid local calls from subscribers and public telephones in the various States during the years ended 30th June, 1945 and 1946, appear hereunder :—

TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS.

State.	Subscribers' Calls.		Calls from Public Telephones.		Total Calls.	
	1944–45.	1945–46.	1944–45.	1945–46.	1944–45.	1945–46.
	'000.	'000.	'000.	'000.	'000.	'000.
New South Wales ..	253,605	277,060	38,111	41,447	291,716	318,507
Victoria	187,851	198,063	19,931	21,067	207,782	219,130
Queensland.. ..	79,154	80,161	11,646	11,187	90,800	91,348
South Australia ..	47,100	49,524	6,341	7,065	53,441	56,589
Western Australia ..	36,022	36,510	3,577	3,534	39,599	40,044
Tasmania	13,356	14,440	1,657	1,777	15,013	16,217
Australia ..	617,088	655,758	81,263	86,077	698,351	741,835

(ix) *Trunk Line Calls and Revenue.* In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1944–45 and 1945–46 compared with 1938–39.

TELEPHONES : TRUNK LINE CALLS AND REVENUE.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
Total Calls—	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1938–39 ..	14,401	11,198	7,306	4,166	2,311	1,770	41,152
1944–45 ..	18,927	15,909	9,532	5,206	2,682	2,573	54,829
1945–46 ..	19,428	16,208	9,841	5,457	2,834	2,745	56,513
Total Revenue—	£	£	£	£	£	£	£
1938–39 ..	739,472	529,190	412,811	196,780	126,141	73,634	2,078,028
1944–45 ..	1,251,058	953,537	645,232	360,759	196,180	126,107	3,532,873
1945–46 ..	1,312,415	956,554	706,315	364,841	206,120	133,444	3,679,689
Average Revenue per call—	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1938–39 ..	12.32	11.34	13.56	11.34	13.09	9.98	12.12
1944–45 ..	15.86	14.40	16.25	16.25	17.55	11.76	15.46
1945–46 ..	16.21	14.16	17.23	16.05	17.45	11.66	15.63

The number of trunk line calls during 1945–46 increased by more than 1½ millions, or 3.1 per cent., compared with the figures for the previous year, whilst the average revenue per call increased slightly.

2. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in tables in § 1.

§ 6. Radio Telegraphy and Telephony.

1. **General.**—A statement in regard to the initial steps taken to establish radio telegraphy in Australia appears in Official Year Book No. 18, p. 343.

2. **Wireless Licences.**—(i) *General.* Particulars of the various types of licences appear in Official Year Book No. 34, p. 143.

The following table shows the number of each class of licence in force in each State and Territory as at 30th June, 1946 :—

NUMBER OF WIRELESS LICENCES : 30th JUNE, 1946.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Coast	1	1	6	1	5	3	1	..	18
Ship	74	78	13	15	2	..	..	..	182
Aircraft	7	27	12	5	6	..	..	..	57
Land	40	5	103	54	92	9	67	2	372
Broadcasting—									
National (*a*) ..	7	(*b*) 8	(*b*) 7	3	(*b*) 6	3	..	1	35
Commercial ..	35	19	19	8	10	8	..	1	100
Broadcast Listeners'—									
One receiver ..	547,451	396,700	186,396	152,244	101,964	49,200	222	2,617	1,436,794
More than one receiver ..	25,656	19,085	4,790	12,253	4,565	2,792	5	140	69,286
Total ..	573,107	415,785	191,186	164,497	106,529	51,992	227	2,757	1,506,080
Experimental ..	..	..	..	..	..	..	..	..	..
Portable	12	2	6	6	4	..	7	16	53
Special	179	308	78	14	44	10	1	1	635
Total Issued ..	573,462	416,233	191,430	164,603	106,698	52,025	303	2,778	1,507,532

(*a*) Operated by Australian Broadcasting Commission. (*b*) Includes Short Wave Stations—Victoria, 3 ; Queensland, 1 ; Western Australia, 1.

(ii) *Broadcast Listeners' Licences.* The striking development of the use of the radio in Australia is illustrated by the following table, which gives the number of broadcast listeners' licences in force at 30th June, 1925, 1930, 1935, 1939, 1940 and 1943 to 1947 :—

NUMBER OF BROADCAST LISTENERS' LICENCES.

In force at 30th June—	N.S.W. (*a*)	Victoria.	Q'land. (*b*)	S. Aust. (*c*)	W. Aust.	Tasmania.	Australia.
1925 ..	33,719	19,243	1,061	3,118	3,417	501	61,059
1930 ..	111,080	139,887	23,263	25,671	5,715	6,032	311,648
1935 ..	278,648	236,886	67,369	76,365	41,176	20,088	720,532
1939 ..	433,029	327,579	133,217	117,307	79,262	39,392	1,129,786
1940 ..	458,155	348,158	151,110	124,891	87,764	42,182	1,212,260
1943(*d*) ..	552,044	390,950	177,846	151,258	97,785	49,910	1,419,793
1944 ..	560,032	409,325	180,090	155,253	99,246	50,356	1,454,302
1945 ..	570,312	412,317	184,341	160,210	102,065	50,557	1,479,802
1946 ..	575,864	415,785	191,286	164,724	106,529	51,992	1,506,180
1947 ..	679,505	499,944	228,066	180,909	121,149	61,674	1,771,247

(*a*) Includes Australian Capital Territory. (*b*) Includes Papua. (*c*) Includes Northern Territory. (*d*) Commencing in July, 1942, licences for receivers in excess of one are included.

3. **Broadcasting.**—(i) *The National Broadcasting Service.* The technical services for the National Broadcasting System are provided by the Postmaster-General's Department, and the programmes by the Australian Broadcasting Commission, a body consisting of five members, constituted under the provisions of the Australian Broadcasting Act.

At the 30th June, 1947, the National Broadcasting System of Australia comprised 37 transmitting stations as follows :—

Medium-wave Stations—

2FC and 2BL Sydney.
2NC Newcastle.
2NA Newcastle.
2CO Corowa.
2NR Lawrence.
2CR Cumnock.
2CY Canberra.
3LO and 3AR Melbourne.
3GI Sale.
3WV Dooen.
4QG and 4QR Brisbane.
4AT Atherton.
4QL Longreach
4QN Townsville.
4RK Rockhampton.
4QS Dalby.
5CL and 5AN Adelaide.
5CK Crystal Brook.
5DR Darwin.
6WF and 6WN Perth.
6WA Minding.
6GF Kalgoorlie.
6GN Geraldton.
7ZL and 7ZR Hobart.
7NT Kelso.
9PA Port Moresby.

Short-wave Stations—

VLG, VLH and VLR Lyndhurst, Victoria.
VLQ Brisbane, Queensland.
VLW Perth, Western Australia.

With the exception of the short-wave stations, all transmitters operate in the medium frequency broadcast band 550 to 1,500 kilocycles per second. From the short-wave stations, using frequencies within the band 6 to 20 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, Northern Territory, and Northern and Central Queensland.

In addition to the short-wave stations under the National Broadcasting System the Department of Information operates three short-wave stations at Shepparton, Victoria (VLA, VLB, VLC) for oversea services only.

Programmes for country regional stations are normally relayed from the central studio of the nearest capital city, high quality programme transmission lines being used for the purpose. A number of programme channels is utilized to link national broadcasting stations in the capital cities of Australia, and frequently this system is extended to connect both the national and commercial broadcasting stations.

(ii) *Broadcast Listeners' Licences.*—(1) The general position regarding the fees payable for broadcast listeners' licences is as follows :—

	Zone 1.	Zone 2.
(*a*) For a single receiver possessed by a person ..	£1 ..	14s.
(*b*) For receivers in excess of one possessed by a person	10s. ..	7s.

(2) Free licences are granted to blind persons and to schools with an enrolment of less than 50 pupils. Invalid and age pensioners who live alone or with another such pensioner are required to pay only half the ordinary fees, i.e. :—

	Zone 1.	Zone 2.
(*a*) For a single receiver	10s. ..	7s.
(*b*) For receivers in excess of one	5s. ..	3s. 6d.

Zone 1 is the area within 250 miles of a National Broadcasting Station. Zone 2 is the remainder of the Commonwealth.

The Australian Broadcasting Commission receives the amounts shown below out of the fee for each broadcast listener's licence :—

Fee.	Amount paid to Commission.
s. d.	*s. d.*
20 0	11 0
14 0	11 0
10 0	5 6
7 0	5 6
5 0	3 0
3 6	3 0

(iii) *Commercial Broadcasting Stations.* The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 per annum, plus one-half of one per centum of the gross earnings from the operations of a station which has made a profit in the year preceding. The maximum initial period of a licence is three years, and it is renewed for a period of one year at the discretion of the Postmaster-General. Licensees of these stations do not share in the listeners' licence fees, but rely for their income on revenue received from the broadcasting of advertisements and other publicity. The number of these stations in operation at 30th June, 1947, was 100 and there are other stations in prospect.

(iv) *Radio Inductive Interference.* The Postmaster-General's Department takes active measures to suppress, so far as possible, interference with broadcast reception resulting from the radiations of energy from electrical machinery and appliances. During the year 1945–46 the Department investigated 4,074 complaints of interfering noises, which, in all but a few instances, were eliminated with the co-operation of the owners of the offending equipment.

(v) *Prosecutions under the Wireless Telegraphy Act.* During the year 1945–46 1,845 persons were convicted for using unlicensed broadcast receiving equipment. The total fines and costs amounted to £4,994.

4. **Overseas Communication by Wireless.**—(i) *Beam Radio Telegraph.* The beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (A/asia.) Ltd. were completed early in 1927 and a direct beam radio telegraph service to England was established on 8th April, 1927. A similar service to North America was opened on 16th June, 1928, and other radio telegraph services have since been established for communication with Barbados, Ceylon, China, India and United States of America. Satisfactory communication is maintained daily over a period of hours, and the services are well patronized by the public. On the 1st October, 1946, as a result of the Overseas Telecommunication Act all external radio services operated by Amalgamated Wireless (A/asia.) Ltd. were transferred to the Overseas Telecommunication Commission (Australia). A brief outline of the operations of the Oversea Telecommunication Commission will be found in para. (iv) of this section. A comparison of the rates charged for " Beam " and Cable messages is given in Section 4. Oversea Cable and Radio Communication. Particulars of international traffic via ' Beam " are given in paragraph (iii) (*a*) following.

(ii) *Radio Telegraph Communication in the Pacific.*—Radio telegraph services are in existence between Sydney and Manila (Philippine Islands), Noumea (New Caledonia), Port Moresby (Papua), Suva (Fiji) and China. Prior to the war with Japan, nine wireless telegraphy stations were established in New Guinea and Papua for communication with ships, while several internal point to point services were provided for use by administrative officials, gold exploration parties, missionaries and others. These services were suspended on the outbreak of hostilities in the Pacific and have not yet been restored.

(iii) *Radiotelegraphic Traffic.* (*a*) *International.* The following statement shows particulars of international traffic " via Beam " to and from United Kingdom and other places during the years ended 30th June, 1945 and 1946 :—

RADIO TRAFFIC : INTERNATIONAL, 1944–45 AND 1945–46.

Class of Traffic.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary (*a*) ..	527,728	419,398	947,126	804,069	657,020	1,461,089
Deferred ordinary ..	1,395,143	1,071,469	2,466,612	1,803,770	1,067,685	2,871,455
Government (*a*) ..	60,677	155,746	216,423	108,003	487,481	595,484
Press (including deferred press) ..	1,844,519	788,093	2,632,612	10,642,743	8,690,652	19,333,395
Daily letter and greeting telegrams ..	2,117,116	2,149,029	4,266,145	3,780,893	3,664,639	7,445,532
E.F.M.(*b*)	91,732	26,730	118,462	19,429	65,170	84,599
Total 1945–46 ..	6,036,915	4,610,465	10,647,380	17,158,907	14,632,647	31,791,554
1944–45 ..	5,124,628	4,887,294	10,011,922	17,853,691	12,511,640	30,365,331

(*a*) Includes code telegrams. (*b*) Special telegrams, usually in standard phrases, for transmission to and from members of the Defence Services abroad.

(*b*) *Coast Stations.* Particulars of the traffic handled by the several coast stations during 1945–46 are as follows :—

RADIO TRAFFIC : COAST STATIONS, 1945–46.

State or Territory.	Particulars.				
	Total Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales ..	2,681,281	79,592	11,900	1,538	93,030
Victoria	60,389	4,131	1,172	465	5,768
Queensland	200,519	11,498	5,143	9,928	26,569
South Australia	42,503	2,564	1,587	867	5,018
Western Australia ..	242,288	12,170	7,859	4,566	24,595
Tasmania	101,431	5,766	860	484	7,110
Northern Territory ..	90,481	4,418	1,855	18,654	24,927
Australia	3,418,892	120,139	30,376	36,502	187,017
Papua and New Guinea ..	2,385,719	53,283	4,029	..	57,312
Grand Total ..	5,804,611	173,422	34,405	36,502	244,329

During 1944–45 the traffic at Australian coastal stations amounted to 84,839 messages with 4,312,956 paying words.

(*c*) *Island Stations.* Particulars of the island radio traffic dealt with during 1941–42 are given in the following table. Later particulars are not available owing to the suspension of this service.

RADIO TRAFFIC : ISLAND STATIONS, 1941–42.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Total.
	No.	No.	No.	No.	No.
Messages	5,913	5,841	13,376	3	25,133
Words	167,815	226,089	210,425	57	604,386

(iv) *Overseas Telecommunications Commission.* (*a*) *Constitution and Purpose.* In the sphere of telecommunications the year 1946 was marked in Australia by important developments. The chief of these, and the one from which the others followed, was the passing by the Commonwealth Parliament of the Overseas Telecommunications Act 1946, assented to on 7th August, 1946. When full effect has been given to the programme authorized by the Act the wireless and cable services linking Australia with the rest of the world will have passed into public ownership. The change will bring to a close the long connexion of private enterprise with these services, and will open the way to their operation as a single integrated system. It will also bring them into a closer relationship with the internal telecommunications services, which have been owned and operated by the Commonwealth since federation.

The body set up under the Act to bring these changes into effect is the Overseas Telecommunications Commission (Australia). The Commission is a body corporate with perpetual succession and a common seal, and consists of five members appointed by the Governor-General. The Act also makes provision for the appointment of a general manager, who is the Commission's chief executive officer, and empowers the Commission to appoint such other officers as may be necessary. The Commission was formally constituted shortly after the passing of the Act, and has established its head office in Sydney. It operates under the ministerial direction of the Postmaster-General. The members of the Commission are Mr. J. Malone, M.C., F.I.R.E., formerly Deputy Director, Posts and Telegraphs, Sydney (Chairman), Mr. L. B. Fanning, I.S.O., Director-General, Postmaster-General's Department (Vice-Chairman), Mr. S. G. McFarlane, C.M.G., M.B.E., Secretary to the Commonwealth Treasury, Mr. G. T. Chippindall, Assistant Director-General, Postmaster-General's Department, and Mr. G. Gowans. The General Manager and Chief Executive Officer is Major General J. E. S. Stevens, C.B., D.S.O., E.D.

The action which is being taken in Australia is part of a general plan for the transfer to public ownership of the entire telecommunications network of the British Commonwealth of Nations. Under this plan the United Kingdom Government and the Governments of Canada, India, New Zealand, South Africa and Southern Rhodesia are also to take over the private interests in the external telecommunication services operated from their territories, and will arrange, as in Australia, for the services to be operated under unified national control. The various controlling authorities will each have complete autonomy within their separate spheres, but a central co-ordinating body, the Commonwealth Telecommunications Board, is to be set up with a view to securing close co-ordination in all matters of common concern. The plan as a whole represents an attempt to secure the advantages of co-ordination, together with public ownership, on the largest scale, while at the same time making full provision for the preservation of regional identity and freedom of action. The different Governments concerned have all agreed to introduce legislation as soon as possible to authorize the implementation of the plan.

(*b*) *Origin and Development.* From a historical standpoint the action now being taken is the result of a long process. In regard to the intergovernmental arrangements, this may be said to date from 1927, when the present Beam Wireless Service between the United Kingdom and Australia was inaugurated. This service, owing to the relatively low capital costs involved in its establishment, was able to offer rates lower than those charged by the cable companies, and it soon became clear that if unrestricted competition were to prevail the financial position of the cable companies would be seriously affected. On the other hand there was a strong case for the retention of the cables, in that they afforded the only completely secret means of communication in time of war, and were not subject to the daily fading and occasional prolonged interruptions which have to be contended with in long distance wireless transmission. Some plan combining the advantages of both systems had therefore to be found.

The first step in this direction was taken in 1928, when a merger of all the cable and wireless interests in Great Britain was effected under the sponsorship of the United Kingdom Government. The merger company, which subsequently became known as Cable and Wireless Limited, was made responsible for the operation of the cable and wireless services generally, and subject to certain conditions relating to charges to users, etc., was given exclusive rights in this connexion. These arrangements, however, did not quite fulfil the hopes of those who devised the plan, nor did the later modifications of the original plan which were made at intervals during the ensuing seventeen years. The whole position finally came up for review at a conference held in London in July and August of 1945. This conference, which was attended by representatives of all the Empire Governments, at length adopted the proposals which are now being carried into effect. It is noteworthy that the plan finally adopted was based very largely upon proposals put forward by the Australian and New Zealand representatives.

Within Australia, proposals for the nationalization of the external telecommunication services have also a long history. The internal telecommunication services, as has been mentioned above, have been owned and operated by the Commonwealth since federation, and the external wireless services, established in 1912 for the handling of traffic with ships at sea, were operated on the same basis until 1922, when they were transferred by the Government to the company now known as Amalgamated Wireless (Australasia) Limited. The earliest formal proposal for their re-acquisition by the Commonwealth was put forward in 1929, when the Government refused to ratify a plan for the merger of the cable and wireless services in Australia on a private basis, intimating that it favoured the operation of these services by a public instrumentality. Plans for action to give effect to this view were considered by several subsequent Governments, but no finality was reached until 1941. The plans now being put into effect were developed under decisions given then.

The cable services linking Australia with the rest of the world were opened originally by private operators, and, as regards the Cape and Gibraltar cables, have been uninterruptedly in private ownership throughout their history. The Pacific Cable System, however, which was opened in 1902, was sponsored and financed as an inter-governmental project, and was publicly owned until 1929, when it was transferred to Cable and Wireless Limited. The amalgamation of the cable and wireless services has been a basic feature of all the telecommunications plans which have been given governmental consideration in Australia since 1929.

(c) *Transfer of Services.* At the time of the passing of the Overseas Telecommunications Act the external radio services handling public correspondence to and from Australia were all operated by Amalgamated Wireless (Australasia) Limited. The transfer of these services to the Commission was effected on 1st October, 1946. The total consideration paid to the Company in connexion with the transfer was £1,400,000, plus an allowance of £25,000 to the company to cover the costs of re-locating a number of broadcasting installations erected on sites taken over by the Commission. The agreement entered into with the company provides that the transferred telecommunications services will be managed by the company on the Commission's behalf for an initial period, pending completion by the Commission of its arrangements for staffing and organization.

The services which the Commission took over on 1st October, 1946, comprise—

(*a*) The Beam Wireless Service which operates to London, Canada, China, Manila, Java, United States of America and Bombay.
(*b*) The Overseas Radio Telephone Services which operate at the moment to London, New Zealand, America, Rabaul, Port Moresby and Nauru—a much curtailed service compared with pre-war years, when it extended to India and, through London, to almost every country in Europe. In the case of these radio telephone services, the Commission will be responsible for technical operation. Calls will continue to be booked with, and connected by, the Postmaster-General's Department.
(*c*) The Coastal Radio Service which operates between the radio stations scattered round the Australian coastline and in adjacent islands and ships at sea, and also provides a service between Australia and adjacent islands.
(*d*) The Picturegram Service for the transmission of images between Australia and Great Britain, Canada, and the United States of America.
(*e*) Radio telegraph and telephone services to the Territories of the Commonwealth.
(*f*) Radio telegraph services between land stations and aircraft operating outside Australia.

The following are the locations at which stations were operating at the date of the transfer of the radio services to the Commission :—

Beam Stations—	
New South Wales	.. Pennant Hills (Transmitting). La Perouse (Receiving).
Victoria	.. Ballan (Transmitting). Rockbank (Receiving).
Coastal Radio Stations—	
New South Wales ..	.. Pennant Hills (Transmitting).
New South Wales ..	.. La Perouse (Receiving).
Victoria	.. Braybrook (Transmitting). Rockbank (Receiving).

Coastal Radio Stations—continued.

Queensland	Brisbane.
	Townsville.
	Rockhampton.
	Cooktown.
	Thursday Island.
	Willis Island.
South Australia	Adelaide.
Western Australia	Perth.
	Esperance.
	Geraldton.
	Broome.
	Wyndham.
Tasmania	Hobart.
	King Island.
	Flinders Island.
Northern Territory	Darwin.
New Guinea-Papua	Port Moresby.
	Lae.

Prior to the 1939–45 War stations were also operated in New Guinea-Papua at Madang, Manus, Samarai, Kavieng, Kieta and Rabaul. Action for the re-establishment of the services in Papua-New Guinea generally is being taken at the present time, though the new arrangements will probably differ in some respects from those of the pre-war period.

(*d*) *Cable Services.* The cable services in Australia are operated by Cable and Wireless Limited, the English company established in 1929 to take over the Empire cable network and the cable and wireless services in Great Britain. Negotiations for the taking over of the Australian portion of this great undertaking are in progress at the present time. The plans under discussion provide for the transfer of the services to the Commission at the earliest practicable date during 1947, leaving questions of compensation, etc., for determination at a later stage. Pending the transfer the services will continue to be operated by the company.

The transfer of the cable services to the Commission will place under the Commission's control the cable stations at Melbourne, Sydney, Adelaide, Perth, Southport (Queensland) and Norfolk Island.

In addition the Commission will probably assume responsibility on a slightly different basis for the stations at Suva and on Fanning Island. The cables themselves will pass into the hands of the national authority which is to be set up in England to replace Cable and Wireless Limited, and cable maintenance, etc., will be the responsibility of that body.

(*e*) *Traffic.* Over the beam wireless services some 40 million paid words per year are transmitted. Over the radio telephone services about 150,000 paid minutes of business are completed annually. The coastal radio service carries nearly 5 million paid words annually and, in addition, transmits nearly a million words, comprising weather messages, navigation warnings, etc., free of charge. These stations not only provide a communication service but they also provide definite aids to navigation in Australian coastal waters. Cable services carry about 40 million paid words annually.

(*f*) *Development and Research.* Other interesting aspects of the arrangements now being made by the various Partner Governments which have subscribed to the overall scheme are the provision for co-ordination and mutual consultation and the provision for development and research. On the first of these points steps are being taken to establish a Commonwealth Telecommunications Board, which will sit in London and on which all the Partner Governments will have equal and direct representation. The constitution and functions of the Board are defined in the Second Schedule to the Act under which the Commission itself is established. Research and development will be partly the responsibility of the various national authorities, including the Commission, and partly that of the Commonwealth Telecommunications Board, which will receive grants of money from the national authorities to enable it to further this important part of its work. The Commission in Australia is keenly alive to the necessity of keeping its equipment and methods fully abreast of current technical developments, and has in contemplation an extensive programme for overtaking the maintenance and development arrears which accumulated during the war. Provision is also being made for local research work on the specific and background problems of wireless and cable operation.

(g) *International Conferences.* A further point is that under its Act the Commission assumes responsibility, in association with the Postmaster-General's Department, for fulfilment of the obligations resting upon the Australian Government under the International Telecommunications Convention of 1932 and the many other international agreements relating to telecommunications traffic. An important series of international conferences on telecommunications matters is to be held during 1947, including a Plenipotentiary Conference for the revision of the Convention of 1932, and it is contemplated that the Commission will have representatives in attendance at all discussions. In addition to the matters to be dealt with by the Plenipotentiary Conference questions for discussion will include the general subject of rates, on which important steps in the direction of simplification were made at a conference held at Bermuda in 1945, and the technical developments which have taken place during and since the war. The allocation of the radio frequency spectrum amongst the very numerous national and functional claims for frequencies will also be considered. Over 60 nations will probably be represented at the conferences.

CHAPTER VI.

EDUCATION.

§ 1. General.

1. **Evolution of Educational Systems of the States.**—As the first settlement in Australia was in New South Wales, it was but natural that Australian education should have had its beginning in that State, and consequently the mother State has played a leading part in the evolution of educational method and system in Australia. The subject is dealt with in some detail in the first two issues of the Official Year Book, which also contain a more or less detailed account of the origin and earlier development of the educational systems of the other States.

2. **Later Development in State Educational Systems.**—Issues of the Official Year Book up to No. 22 contain an outline of later developments of the educational systems of the various States. The educational systems of the States may now be considered as more or less homogeneous entities, the various stages succeeding one another by logical gradation from kindergarten to university.

3. **School Age.**—The statutory school age for children in each State, set out briefly, is as follows :—New South Wales, 6 to 15 years ; Victoria, 6 to 14 years ; Queensland, 6 to 14 years ; South Australia, 6 to 14 years ; Western Australia, 6 to 14 years ; and Tasmania, 6 to 16 years. In New South Wales the statutory school age was from 7 to 14 years during 1917 to 1939 ; from 6 to 14 years in 1940 ; from 6 to 14 years 4 months in 1941 ; from 6 to 14 years 8 months in 1942 ; and from 6 to 15 years in 1943. In Tasmania the statutory school age was from 7 to 14 years, but legislation passed in 1943 reduced the lower age limit to 6 years. In 1942 the school leaving age was increased to 16 years but was not to operate till after the war. This provision was proclaimed to operate from 1st February, 1946. Legislation was passed in 1943 in Victoria and Western Australia increasing the school leaving age to 15 years, but neither of these provisions had been proclaimed at the end of September, 1947. In South Australia legislation was passed in 1946, enabling the Governor-in-Council to raise the leaving age by proclamation to an age not exceeding 15 years.

It is provided in some States that where a child is living outside stated distances from a State school, the age at which the child must commence school is increased. Provision is also made that a scholar having attained a certain standard of education may leave school before reaching the statutory leaving age.

At the 1936 Conference of Directors of Education a resolution was passed urging the necessity of raising the compulsory school leaving age to 15 years. This resolution was submitted to a conference in Sydney of Ministers of Education who agreed to recommend to their respective Governments legislation to implement the proposal by the year 1940, but owing to war conditions its operation was postponed.

4. **Australian Council for Educational Research.**—This Council was constituted on 10th February, 1930, as the result of an endowment from the Carnegie Corporation of New York. The endowment terminated in December, 1942, by which time the total value in Australian currency of the annual payments had amounted to £120,000. The Council now receives grants from the Commonwealth Government and the six State Governments which in 1947 amounted to £7,500 a year.

The Council consists of nine members of whom six are elected by State Institutes for Educational Research established in each of the Australian States. The functions of the Council are to conduct surveys and inquiries in the educational field, to make grants to approved investigators, to act as a centre of information on educational developments both within Australia and overseas, to provide services of a technical character such as those connected with the assessment of knowledge and aptitude, and to provide training for research workers. In general, through the publication of reports and in other ways, the Council aims at improving the standards of education and at stimulating thought about educational problems. So far about 90 reports have been published, two of the latest being respectively " A Brief Guide to Australian Universities " and a study of the problem of the supply of teachers. The Council also issues a series of information bulletins.

The Council is autonomous, but maintains close contact with State educational authorities, with the Commonwealth Office of Education, with the Universities and with other educational bodies. Its present investigations include a comparative survey of the courses of study and examinations for children between twelve and sixteen years, made at the request of the State Education Departments, and a study of the prediction of success of University students.

During the 1939–45 War the Council was called upon for advice and service by the following Commonwealth departments :—Labour and National Service, Man Power, Post-war Reconstruction, Home Security, War Organization of Industry and the Department of the Army. The Council acts as the chief centre in Australia for the preparation and distribution of standardized tests of general intelligence, special aptitude, and educational attainment. It has recently set up a Test Research and Construction Section to deal with this aspect of the work.

The head-quarters of the Council are at 147 Collins-street, Melbourne, C.1, Victoria

§ 2. Census Records.

1. **Persons Receiving Instruction.**—The Census and Statistics Act 1905–1938 specified " Education " as a subject for inquiry at a Census, but did not indicate the nature or range of the information to be furnished. The Census and Statistics Act 1946, however, provided for the omission of this subject. At earlier Censuses an inquiry regarding the degree of education was restricted to a question as to ability to read and write, but under the system of compulsory education the number of persons in Australia who reach maturity without being able to read and write is very small, and this question was

omitted at the 1933 Census. The only question asked concerned those receiving instruction at the time of the 1933 Census and related to the nature of the school they were attending. Details for the Censuses of 1911, 1921 and 1933 were as follows :—

PERSONS RECEIVING INSTRUCTION AT THE DATE OF THE CENSUS, AUSTRALIA, 1911 TO 1933.

Receiving Instruction at—	Number.			Percentage.		
	1911.	1921.	1933.	1911.	1921.	1933.
				%	%	%
Government School ..	593,059	791,724	904,383	76.49	77.36	77.23
Private School ..	156,106	193,774	224,994	20.13	18.93	19.21
University	2,465	7,252	8,525	0.32	0.71	0.73
Home	23,760	30,712	33,126	3.06	3.00	2.83
Total ..	775,390	1,023,462	1,171,028	100.00	100.00	100.00

2. **Ages of Scholars.**—In the next table the number of scholars at specified ages in 1933 are shown together with the total number of persons recorded for those ages :—

SCHOOLING OF AUSTRALIAN POPULATION (SEXES COMBINED), 30th JUNE, 1933.

Age Last Birthday. (Years.)	Number Receiving Instruction at—				Number not stated and not at School.	Total.
	Government School.	Private School.	Home.	University.		
4	6,287	3,528	2,916	..	(a)556,234	(a)568,965
5	49,051	12,037	3,475	..	60,348	124,911
6	83,816	18,269	3,169	..	17,385	122,639
7	95,811	20,172	3,091	..	7,221	126,295
8	98,769	20,642	2,809	..	5,798	128,018
9	97,616	20,414	2,467	..	5,020	125,517
10	100,676	21,264	2,309	..	5,189	129,438
11	101,047	21,318	2,190	..	4,939	129,494
12	102,087	21,712	2,108	..	5,224	131,131
13	88,375	20,392	2,114	..	9,127	120,008
14	40,868	15,643	1,804	..	56,836	115,151
15	20,149	12,261	1,347	..	86,197	119,954
16	9,784	8,361	869	101	103,265	122,380
17	4,799	4,521	611	494	110,208	120,633
18	2,480	2,087	565	1,224	120,434	126,790
19	1,257	893	403	1,463	121,637	125,653
20 and over ..	1,511	1,480	879	5,243	4,183,749	4,192,862
Total ..	904,383	224,994	33,126	8,525	5,458,811	6,629,839

(a) Includes those aged under 3 years.

3. **Percentage of Persons not Receiving Instruction.**—The compulsory school age in the various States ranged from 6 to 14 years. From the foregoing table it will be seen that the proportion of children aged last birthday from 6 to 13 years receiving instruction was 94.1 per cent. Conversely 5.9 per cent. of the children within the compulsory range were not indicated as receiving instruction at the date of the Census. The corresponding ratio in 1921 was 6.7 per cent.

As the minimum compulsory school age in New South Wales and Tasmania at the date of the Census was 7 years, and as exemptions from further attendance for special reasons on attaining age 13 obtain throughout the States, a more reliable estimate of the percentage of children not receiving instruction may be obtained by ignoring the extreme ages of the compulsory range. The elimination of these ages reduces the percentage from 5.9 to 4.3 per cent. Attendance at school was known to be affected by the severe economic conditions prevailing at the time of the Census, and this latter figure was consequently in excess of the corresponding percentage of 3.7 in 1921. The effect of accessibility to schools may be seen in the further reduction of the percentages of these ages not receiving instruction in the metropolitan areas to 3.5 in 1933 and to 2.9 in 1921.

4. **Religions of Scholars.**—The following table shows the class of school at which the young adherents to the principal religious denominations were being educated at the date of the Census :—

ADHERENTS RECEIVING INSTRUCTION AT DIFFERENT KINDS OF SCHOOLS, AUSTRALIA, 30th JUNE, 1933.

Denomination.	Government School.	Private School.	University.	Home.	Total Specified.
Baptist	17,473	998	166	304	18,941
Catholic, Roman(*a*) ..	84,763	146,197	1,339	6,263	238,562
Church of Christ	10,822	479	86	214	11,601
Church of England ..	397,717	37.442	3,263	14,612	453,034
Congregational	9,274	1,112	202	224	10,812
Lutheran	8,257	910	45	217	9,429
Methodist	116,365	5,926	1,023	2,723	126,037
Presbyterian	108,870	9.836	1,302	3,814	123,822
No Reply	119,130	18,415	646	3,805	141,996
Other	31,712	3,679	453	950	36,794
Total	904,383	224,994	8,525	33,126	1,171,028

(*a*) Including Catholic, Undefined.

The most prominent feature of the results given above is the relatively small proportion of Roman Catholics attending State schools. Of the Roman Catholics reported as receiving instruction, 34.66 per cent. were attending State schools compared with 86.84 per cent. for the rest of the community, the proportion for the whole being 77.23 per cent.

§ 3. State Schools.

1. **General.**—The State schools, or, as they are sometimes termed, the "public" schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called "private" schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding technical education is given in § 9, but the junior technical schools are included hereunder. The returns include figures relating to correspondence schools as well as subsidized schools, but evening schools and continuation classes, where such are in existence, are not included, but are dealt with separately in par. 3 (v) following.

2. **Returns for Year 1945.**—(i) *General.* The following table shows for 1945 the number of State Schools, together with the teachers employed, teachers in training and the number of individual children in attendance :—

STATE SCHOOLS, 1945.

State or Territory.	Schools at end of year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
	No.	No.	No.	No.
New South Wales(*a*)	2,690	11,214	1,403	364,927
Victoria	2,404	8,408	656	209,132
Queensland	1,523	4,962	346	137,146
South Australia	818	2,872	254	72,360
Western Australia	637	2,244	94	(*b*)57,670
Tasmania	370	1,314	107	33,779
Northern Territory(*c*)	5	12	..	407
Australia—1945	8,447	31,026	2,860	875,421
1944	8,651	31,200	2,458	878,428

(*a*) Includes Australian Capital Territory. (*b*) Average weekly enrolment. (*c*) Year ended 30th June, 1946.

(ii) *Average Enrolment and Attendance.* The methods of calculating enrolment are not identical throughout the States. The unit in South Australia is the daily enrolment while New South Wales, Victoria, Western Australia and Tasmania employ the weekly enrolment. In Queensland no average enrolment is compiled, and the mean of the four quarterly gross enrolments is the only figure available.

As with enrolments there is not complete uniformity in arriving at the average attendance, but most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The matter of securing uniformity in these respects has been under consideration for some time, and the Australian Council for Educational Research, already referred to in § 1, par. 4, is devoting attention to the question of securing greater uniformity in methods of collection and presentation of educational data generally. This matter was discussed at a meeting of Directors of Education at a conference held in Sydney in July, 1947. The average enrolment and attendance in each State during 1945 are shown below :—

STATE SCHOOLS : AVERAGE ENROLMENT AND ATTENDANCE, 1945.

State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance on Enrolment.
	No.	No.	%
New South Wales	335,915	293,251	87.29
Victoria	198,239	177,027	89.30
Queensland	131,607	110,527	83.98
South Australia	70,110	64,301	(*a*) 91.47
Western Australia	57,670	52,452	90.95
Tasmania	31,800	28,497	89.61
Northern Territory(*b*)	407	385	94.59
Australia—1945	825,748	726,440	87.94
1944	823,600	722,942	87.74

(*a*) Excludes correspondence students. (*b*) Year ended 30th June, 1946.

The percentage of attendance on enrolment is lowest in Queensland, but this figure is not comparable with those of the other States, as no average enrolment is available for Queensland.

Extraordinary epidemics apart, it would appear from the steadiness of the returns in recent years that the percentage of attendance on enrolment is approaching its maximum under present conditions in Australia. Recurring epidemics of contagious diseases, minor illnesses, bad weather and long distances are all serious factors limiting the full attendance of pupils at school.

The average attendance at the State Schools in Australia is shown below for the year 1891 and at varying intervals to 1945 :—

STATE SCHOOLS : AVERAGE ATTENDANCE, AUSTRALIA.

Year.	Total Population. (a)	Average Attendance.	Year.	Total Population. (a)	Average Attendance.
1891	3,421	350,773	1939	7,005	744,095
1901	3,825	450,246	1941	7,144	732,116
1911	4,574	463,799	1942	7,201	686,330
1921	5,511	666,498	1943	7,270	706,650
1931	6,553	817,262	1944	7,348	722,942
1933	6,657	805,334	1945	7,431	726,440

(a) At 31st December, in thousands.

It is possible, for Census years, to relate with reasonable accuracy the average attendance of scholars at State Schools to the number of children who are approximately of school age. For this purpose the ages 5 to 15 years, both included, have been taken and the average attendance per thousand children was :—1891, 455 ; 1901, 464 ; 1911, 477 ; 1921, 544 ; and 1933, 585. Although other factors might have affected the results in a minor degree it would appear that considerable improvement has taken place in school attendance.

(iii) *Schools in the Northern Territory.* During 1945–46 five public schools were in operation, the number of pupils enrolled being 407, with an average daily attendance of 385. By arrangement between the Commonwealth and the South Australian Governments, the South Australian Education Department undertook the work of education in the Northern Territory from 1st January, 1945. The Commonwealth Government provides the schools and furniture, while the South Australian Education Department provides the teachers and determines the curricula for the various types of schools. Prior to this arrangement teachers from the South Australian Education Department taught at Alice Springs and Tennant Creek while teachers from the Queensland Education Department taught at Darwin and the more northern parts of the Territory.

(iv) *Schools in the Australian Capital Territory.* During 1945 eleven State Schools were in operation in the Australian Capital Territory ; individual pupils enrolled numbered 1,785 ; average attendance was 1,637. By arrangement with the Commonwealth Government these schools are conducted by the New South Wales Education Department in the same way as the ordinary State Schools, the Department being recouped for expenditure. The cost of the teaching staff in 1945–46 was £41,000, while the cost of general maintenance items for the year amounted to £15,854. Ample provision has been made for both primary and secondary education, and this will be increased to meet requirements. The figures quoted exclude enrolment, etc., at the Trade School and the Evening Continuation School. A reference to the Canberra University College will be found in § 6, par. 10. For further particulars of education facilities in the Australian Capital Territory see Chapter X.—The Territories of Australia, Australian Capital Territory, par. 10.

3. Distribution of Educational Facilities.—(i) *In Sparsely-settled Districts.*

(*a*) *General.* The methods adopted in the various States to carry the benefits of education into the remotest and most sparsely-settled areas are set out in some detail in previous issues of the Official Year Book (see No. 22, pp. 430–1).

(*b*) *Correspondence Teaching.* Teaching by correspondence has been adopted to meet the needs of children out of reach of the ordinary means of education, including those prevented from attending school through physical ailment. Approximately 17,400 children received instruction in this way during 1945, the respective numbers in each State being: New South Wales, 6,272; Victoria, 1,179; Queensland, 5,515; South Australia, 1,993; Western Australia, 2,030: and Tasmania, 399.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received considerable attention in Australia. It is recognized that a single adequately staffed and well equipped central institution can give more efficient teaching than a number of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1945 a sum of £27,374 was expended in boarding allowances and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1945–46 amounted to £195,277. In Queensland during 1945–46 the cost of transport by rail, road and boat, amounted to £29,353. In South Australia the sum of £58,141 was disbursed in travelling expenses of school children in 1945, while £62,918 was spent in Western Australia during 1945–46, £46,015 in Tasmania in 1945 and £5,288 in the Australian Capital Territory in 1945–46.

(iii) *Area Schools.* A new feature in education are the " Area Schools " established since 1936 in rural districts in Tasmania. These schools cater for certain groups of children brought from surrounding districts by buses and give instruction with a distinct rural inclination. In 1945 there were 15 area schools in operation having an average weekly enrolment of 3,488 scholars with a daily average attendance of 3,086. The total expenditure on these schools in 1945 was £68,806.

(iv) *Education of Backward and Defective Children.* This subject was referred to at some length in preceding issues of the Official Year Book (see No. 22, pp. 431–2).

(v) *Evening Schools.* Evening Continuation Schools have been in existence for many years in some of the States, but their progress has been uncertain. The aim of these schools is to provide a means of furthering the education of those who have left school at the termination of the primary course. Practical and cultural subjects are combined in the curriculum to be of assistance to those attending in their occupations and their civic life. In New South Wales the 26 Evening Youth Colleges had an average weekly enrolment in 1945 of 1,665 and an average attendance of 991. The schools are divided into three groups, junior technical, domestic science, and commercial. Attendances at the schools for boys numbered 831, and at those for girls 160. The cost of maintaining these schools in 1945 was £6,047.

(vi) *Higher State Schools.* In all the States higher schools have been established which provide advanced courses of instruction for pupils who have completed the primary grades. Reference to the development of these schools will be found in preceding Official Year Books (see No. 22, pp. 433–4).

(vii) *Agricultural Training in State Schools.* Extended reference to the methods adopted in the teaching of agriculture in State Schools was incorporated in preceding Official Year Books (see No. 22, pp. 434–7).

(viii) *Medical and Dental Inspection of School Children.* This subject is dealt with in detail in Chapter IX. " Public Hygiene ".

(ix) *Broadcasts to Schools.*—It is estimated that about 45 per cent. of schools in Australia are listening regularly to the Australian Broadcasting Commission's school broadcasts. The broadcasts are made throughout Australia on week-days at times decided upon after consultation with the State Education Departments, bringing to even the most distant schools the benefits of talks by specialists in certain subjects, and talks on subjects which follow closely the syllabus prepared for each of the several public examinations. Some States have directed their efforts towards the provision of minimum standards for school listening sets. There are special broadcast sessions for the benefit of correspondence pupils throughout Australia.

Audio-visual education, a method combining the radio and the film as teaching aids, has been developed, and the lessons are broadcast from studios in Victoria and Western Australia concurrently with the use of the film projectors in the schools.

The "Kindergarten of the Air" is broadcast by all regional and two short-wave stations, as well as from Darwin and Port Moresby, for the benefit of children unable to attend kindergarten schools.

The weekly session for post-school youth "Over to Youth" has developed steadily. Monthly posters are sent to 500 Youth Clubs throughout Australia. Audience participation broadcasts in Sydney and Melbourne have attracted large numbers of young people.

4. **Training Colleges.**—The development of the training systems of the various States is referred to at some length in earlier issues of the Official Year Book (see No. 22, pp. 437–9).

5. **Expenditure.**—(i) *Maintenance — All Schools.* The net expenditure on maintenance in all grades of schools, excepting senior technical schools, and in Victoria and Tasmania junior technical schools, and the cost per head of average attendance for 1939 and the five years ended 1945 are shown in the following table. The figures do not include expenditure on buildings, which is given separately in a subsequent table. In all expenditure tables the figures for Victoria, Queensland and Western Australia relate to the financial year ended six months later than the calendar year.

STATE SCHOOLS : NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total.
				TOTAL (INCLUDING SECONDARY SCHOOLS).				
	£	£	£	£	£	£	£	£
1939	4,508,376	2,667,094	1,481,399	854,037	730.500	320,616	6,802	10,658,824
1941	4,897,223	2,660,924	1,487,293	881,117	773,680	343,034	8,827	11,052,098
1942	4,767,475	2,732,122	1,429,800	884,382	753,730	403,437	4,074	10,975,020
1943	4,970,296	2,945,099	1,510,568	922,307	804,404	421,684	4,643	11,579,001
1944	5,130,704	3,162,195	1,710,760	1,012,648	818,855	421,423	4,151	12,260,736
1945	5,386,412	3,265,201	2,056,409	1,100,469	917,323	492,106	5,185	13,223,105
				PER HEAD OF AVERAGE ATTENDANCE.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1939	15 12 2	14 1 4	13 0 9	12 18 4	14 5 7	11 7 6	11 3 9	14 6 7
1941	16 16 4	14 4 1	13 8 5	14 4 0	14 13 1	12 9 10	18 14 0	15 1 11
1942	17 5 10	15 14 1	14 12 2	14 19 5	14 18 4	14 16 11	27 3 2	16 0 8
1943	17 7 9	16 14 8	14 10 8	15 7 8	15 14 1	15 7 0	25 10 3	16 8 8
1944	17 10 8	17 14 0	15 17 6	15 18 8	15 14 9	15 0 0	20 19 4	16 19 2
1945	18 7 4	18 8 11	18 12 1	17 2 3	17 9 9	17 5 4	13 9 5	18 4 1

(*a*) Gross figures, receipts not being available.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, excluding senior technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. The difficulty of making any satisfactory allocation of the kind, however, will be understood when it is realized that both elementary and higher education are in some instances given in the same school and by the same teacher. Unfortunately, too, the term "secondary" has not the same meaning in all States. It might be mentioned here that similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted in regard to cost hereunder have been mainly extracted from the Reports of the State Education Departments, and are subject to those qualifications.

STATE SECONDARY SCHOOLS : EXPENDITURE ON MAINTENANCE.

State.	1944.		1945.	
	Cost.	Cost per Head of Population.	Cost.	Cost Per Head of Population.
	£	s. d.	£	s. d.
New South Wales	1,165,374	8 1	1,385,701	9 6
Victoria	707,729	7 1	801,588	7 11
Queensland	210,474	4 0	236,290	4 5
South Australia	232,947	7 6	260,237	8 4
Western Australia	(a)171,580	7 2	(b)187,037	7 9
Tasmania	54,264	4 5	66,514	5 4

(a) Year 1943–44. (b) Year 1944–45.

The figures in all cases exclude the cost of buildings. In Victoria the total includes the expenditure on "intermediate" education amounting (excluding administration costs) to £189,983 in 1944–45 and to £206,312 in 1945–46. For Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1944 to £29,114 and in 1945 to £38,980. For Western Australia the total for 1943–44 includes £111,872 and for 1944–45, £115,284 on account of "post-primary" education.

(iii) *Buildings.* Expenditure on State School buildings, excluding Technical Colleges, for the years 1939 and 1941 to 1945 was as follows :—

STATE SCHOOLS : EXPENDITURE ON BUILDINGS.

(Including Loan Fund Expenditure.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total.
	£	£	£	£	£	£	£	£
1939	411,720	206,481	174,725	85,539	56,994	60,011	539	996,009
1941	288,855	164,568	67,406	58,541	30,987	50,907	..	661,264
1942	471,167	149,750	25,655	40,813	19,069	26,192	30	732,676
1943	362,596	114,261	47,614	67,748	40,354	39,951	944	673,468
1944	409,483	176,892	101,780	103,863	78,492	61,828	2,444	934,782
1945	425,397	256,048	114,069	165.642	99,489	70,288	2,303	1,133,236

The totals for the various States in 1945 include the following amounts expended from loan and other funds; figures for 1944 are shown in brackets—New South Wales, £60,022 (£87,415); Victoria, £164,972 (£65,155); Queensland, £63,091 (£66,007); South Australia, £98,687 (£58,669); Western Australia, £75,431 (£43,440); and Tasmania, £46,540 (£40,653).

(iv) *Total.* The net total cost of education in State Schools including buildings, during the years 1939 and 1941 to 1945 was as follows :—

STATE SCHOOLS : NET TOTAL COST.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total. (*b*)
	£	£	£	£	£	£	£	£
1939	5,010,096	2,873,575	1,656,124	939,576	787,494	380,627	7,341	11,654,833
1941	5,186,078	2,825,492	1,554,699	930,658	804,667	393,941	8,827	11,713,362
1942	5,238,642	2,881,872	1,455,455	925,195	772,799	429,629	4,104	11,707,696
1943	5,332,892	3,059,360	1,558,182	990,055	844,758	461,635	5,587	12,252,469
1944	5,540,187	3,339,087	1,812,540	1,116,511	897,347	483,251	6,595	13,195,518
1945	5,811,809	3,521,249	2,170,478	1,266,111	1,016,812	562,394	7,488	14,356,341

(*a*) Gross figures, receipts not being available. (*b*) See footnote (*a*).

The figures in this and the preceding tables refer to all grades of State Schools (with the exception of senior technical schools and in Victoria and Tasmania junior technical schools). Including buildings, the net cost per scholar in average attendance for the whole of the State Schools in Australia amounted in 1945 to £19 15s. 3d., and £18 5s. 1d. in 1944, as compared with £4 9s. 3d. in 1901.

6. **School Banking.**—With the object of inculcating principles of thrift amongst the children, agencies of the Savings Banks have been established at most of the schools throughout Australia. Particulars of operative accounts for each State and Territory at 30th June, 1947, were as follows :—

SCHOOL SAVINGS BANKS AT 30th JUNE, 1947.

State or Territory.	Agencies.	Depositors.	Amount on Deposit.	Average per Depositor.		
	No.	No.	£	£	*s.*	*d.*
New South Wales	2,591	164,067	680,806	4	3	0
Victoria	2,735	145,126	561,325	3	17	4
Queensland	1,289	58,246	351,856	6	0	10
South Australia	857	74,030	328,738	4	8	10
Western Australia	523	43,402	249,921	5	15	2
Tasmania	431	32,699	134,179	4	2	1
Northern Territory	7	258	1,744	6	15	2
Australian Capital Territory	11	801	2,446	3	1	1
Australia—30th June, 1947 ..	8,444	518,629	2,311,015	4	9	1
,, ,, 1946 ..	8,512	516,330	2,125,130	4	2	4
,, ,, 1945 ..	8,676	509,832	1,858,011	3	12	11

§ 4. Private Schools.*

1. **Returns for 1945.**—The following table shows the number of private schools together with the teachers engaged therein, and the enrolment and average attendance in 1945 :—

PRIVATE SCHOOLS, 1945.

State or Territory.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	733	5,321	111,841	97,951
Victoria	506	2,986	83,278	(*a*) 81,667
Queensland	222	1,565	35,949	32,651
South Australia	140	858	15,854	13,871
Western Australia	155	739	18,536	16,939
Tasmania	59	321	7,189	5,799
Northern Territory(*b*)	2	9	167	146
Total—1945	1,817	11,799	272,814	249,024
1944	1,807	11,612	274,793	245,006

(*a*) Net attendance. (*b*) Year ended 30th June, 1946.

The Roman Catholic schools comprise the largest group of private schools in Australia. On the basis of the figures available, approximately 200,000 children, or 77 per cent. of the total in private schools, are educated in Roman Catholic schools.

The figures for Queensland include the returns from Grammar schools, of which there are eight—five for boys and three for girls, with an enrolment of 1,456 boys and 793 girls. These schools are governed by boards of trustees, partly nominated by the Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The Government endowment received in 1945 amounted to £13,525. In addition, a sum of £19,515 was received by way of fees for the tuition of State scholarship holders while £51,461 was paid to denominational schools. The Grammar schools are inspected annually by officers of the Department of Public Instruction.

2. **Growth of Private Schools.**—The enrolment and average attendance at private schools in 1891 and at varying intervals to 1945 were as follows :—

PRIVATE SCHOOLS : ENROLMENT AND ATTENDANCE.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891	124,485	99,588	1939	247,482	219,171
1901	148,659	120,742	1942	250,022	217,249
1911	160,794	132,588	1943	264,433	233,538
1921	198,688	164,073	1944	274,793	245,006
1931	221,387	189,665	1945	272,814	249,024

3. **Registration of Private Schools.**—Conditions in regard to the registration of private schools were referred to in previous Official Year Books (see No. 18, p. 451).

§ 5. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations, and excludes the kindergarten branches in the Government schools of the various States.

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* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is, of course, a misnomer.

FREE KINDERGARTENS, 1946.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
		No.	No.	No.	No.
New South Wales ..	29	1,184	105	156	95
Victoria..	41	1,724	136	24	73
Queensland	6	259	10	45	..
South Australia(*a*) ..	35	978	77	41	27
Western Australia ..	11	359	21	6	
Tasmania	9	389	24	2	5
Total—1946 ..	131	4,893	373	274	200
1945 ..	124	4,563	305	268	159

(*a*) Includes affiliated suburban and country centres.

Only twelve of these 131 kindergartens in 1946 were located outside metropolitan areas; these were as follows :—New South Wales—two at Newcastle, one at Parramatta; Victoria—two at Geelong, one each at Ballarat, Castlemaine, Euroa and Mildura; and Tasmania—two at Launceston and one at Devonport. In each capital city, excepting Hobart, there is a training college and the number of students in training during 1946 was 150 in Sydney, 106 in Melbourne, 45 in Brisbane, 41 in Adelaide, and 40 in Perth.

§ 6. Universities.

1. **Origin and Development.**—A brief account of the origin and development of the Universities in the various States is given in preceding issues of the Official Year Book (see No. 22, pp. 442–3).

2. **Teaching and Research Staff.**—The following table shows the number of professors, readers, associate and assistant professors, lecturers in charge, lecturers, demonstrators, tutors, honorary lecturers and demonstrators, on the teaching and research staffs of the Universities during the years 1944 to 1946 :—

UNIVERSITIES : TEACHING AND RESEARCH STAFF, 1946.

University.	Professors.	Readers, Associate Professors, Assistant Professors, Lecturers in Charge.	Lecturers, Assistant Lecturers.	Demonstrators and Tutors.	Honorary Lecturers and Demonstrators.	Total.
	No.	No.	No.	No.	No.	No.
Sydney	48	16	401	35	70	570
Melbourne	32	18	265	129	3	447
Queensland (Brisbane) ..	19	3	180	44	(*a*) 26	272
Adelaide	24	6	148	142	2	322
Western Australia (Perth) ..	12	8	61	8	(*a*) 16	105
Tasmania (Hobart) ..	13	2	36	6	..	57
New England University College	..	..	24	8	15	47
Canberra University College	..	..	17	..	..	17
Total 1946 ..	148	53	1,132	372	132	1,837
1945 ..	135	46	883	278	121	1,463
1944 ..	130	40	850	310	140	1,470

(*a*) Includes 7, Department of External Studies.

The Conservatorium of Music in Sydney is attached to the Education Department, and is not under the control of the University, as it is in Melbourne and Adelaide.

3. **Students.**—(i) *Total.* The number of students, including Commonwealth Reconstruction Training Scheme students, enrolled for courses at the Universities during the years 1944 to 1946 is shown in the following table :—

UNIVERSITIES : TOTAL STUDENTS ENROLLED, 1946.

University.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total. (*a*)
		Post-Graduate.	Sub-Graduate.			
	No.	No.	No.	No.	No.	No.
Sydney	7,579	170	541	..	302	8,509
Melbourne (*b*)	5,697	..	836	58	692	7,283
Queensland (Brisbane) ..	2,254	30	255	225	237	2,997
Adelaide	2,332	153	625	1	1,166	4,277
Western Australia (Perth) ..	1,294	35	2	..	73	1,399
Tasmania (Hobart) ..	532	8	16	..	131	687
New England University College	177	25	..	..	..	202
Canberra University College	104	..	73	..	54	231
Total 1946 ..	19,969	421	2,348	284	2,655	25,585
1945 ..	11,953	196	1,276	86	2,155	15,586
1944 ..	9,729	170	1,041	91	2,061	12,966

(*a*) Adjustment made for students enrolled in more than one course. (*b*) Includes 19 students enrolled but attending Canberra University College.

Of the total students in 1946, 19,346 were males and 6,239 females. Included in those enrolled for degrees, were 67 enrolled for higher degree courses in Melbourne, 63 in Adelaide, and 21 in Western Australia.

(ii) *Commonwealth Reconstruction Training Scheme Students.* The number of Commonwealth Reconstruction Training Scheme students enrolled for courses at the Universities during 1945 and 1946 is shown in the following table :—

UNIVERSITIES : COMMONWEALTH RECONSTRUCTION TRAINING SCHEME STUDENTS ENROLLED, 1946.

University.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total. (*a*)
		Post-Graduate.	Sub-Graduate.			
	No.	No.	No.	No.	No.	No.
Sydney	2,626	19	95	..	25	2,765
Melbourne (*b*)	2,035	..	414	36	198	2,683
Queensland (Brisbane) ..	753	8	115	82	92	1,049
Adelaide	630	49	256	..	182	1,117
Western Australia (Perth) ..	450	17	2	..	40	505
Tasmania (Hobart) ..	188	3	6	..	21	218
New England University College	33	4	..	..	..	37
Canberra University College	74	..	61	..	10	145
Total 1946 ..	6,789	100	949	118	568	8,519
1945 ..	982	6	95	..	38	1,121

(*a*) Adjustments made for students enrolled in more than one course. (*b*) Includes 10 students enrolled but attending Canberra University College.

Of the total Commonwealth Reconstruction Training Scheme students in 1946, 8,196 were males and 323 females. Included in those enrolled for degrees were 6 enrolled for higher degrees in Melbourne, 4 in Adelaide and 1 in Western Australia.

(iii) *External Service Personnel.* In addition to the students shown in the previous tables there were External Service Forces Personnel enrolled at the various universities. the total numbers for years 1944 to 1946 being as follows :—1944, males 2,068, females 120 ; 1945, males 2,661, females 79 ; and 1946, males 1,652, females 27.

4. **University Receipts.**—The receipts of the Universities are derived principally from Government grants, students' fees, and income from private foundations, etc. The receipts for the general University functions from all sources other than new bequests during 1946 are shown in the table below. In South Australia Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute. The receipts and expenditure for extra-university activities are shown in para. 7 following.

UNIVERSITIES : RECEIPTS, GENERAL ACTIVITIES, 1946.

University.	Government Grants.	Students' Fees.	Interest, Rent, Dividends and Donations.	Other.	Total
	£	£	£	£	£
Sydney	201,645	236,207	54,574	9,672	502,098
Melbourne	211,444	149,167	36,081	27,378	424,070
Queensland (Brisbane) ..	93,523	55,643	18,806	10,613	178,585
Adelaide	105,505	60,463	24,935	10,555	201,458
Western Australia (Perth) ..	73,556	7,543	547	14,951	96,597
Tasmania (Hobart) ..	36,195	6,617	222	2,069	45,103
New England University College	27,992	2,957	451	11,756	43,156
Canberra University College	11,380	2,219	33	169	13,801
Total 1946 ..	761,240	520,816	135,649	87,163	1,504,868
1945 ..	507,489	303,207	119,924	60,811	991,431
1944 ..	508,689	245,609	122,993	53,034	930,325

The figures in the foregoing table do not include the value of new foundations received by the Universities during 1946, which were as follows :—Sydney, £19,810 ; Melbourne, £88,911 ; Queensland, £2,076 ; and Adelaide, £6,926.

5. **Principal University Benefactions.**—In preceding issues of the Official Year Book information is given in some detail in regard to the extent to which the Universities have benefited from private munificence. Space will permit of reference herein to the more important benefactions only.

The endowments to the Sydney University include the Challis Fund, £404,373 ; the G. H. Bosch Fund, £268,928 ; the P. N. Russell Fund, £101,456 ; the Oswald Watt Fund, £115,744 ; and the Fisher Estate, £43,407. In addition. the University receives a large annual revenue from the trustees of the McCaughey bequest. Excluding the principal of the latter, the credit balances of the private foundations amounted to £1,641,689 at 31st December, 1946.

Mr. David Edward Lewis in 1941 bequeathed approximately £700,000 to trustees to provide scholarships at the Melbourne University for boys from State elementary and secondary schools. This bequest is the largest made in Australia for educational purposes. Mr. Sidney Myer's gifts for various special and general purposes amounted to £60,000, while Sir Samuel Gillott, Mr. Edward Wilson (Argus Trust), and Sir Samuel Wilson contributed £41,000, £34,000, and £30,000 respectively. The estate of the late Miss Helen Mackie provided £40,000 for the endowment of pre-clinical chairs, while Mr. R. B. Ritchie's gifts for the endowment of a Chair of Economics amounted to £30,000, and two sums of £30,000 and £25,000 were received from the Supreme Court Library Fund for the endowment of a Chair of Public Law and for the development of law teaching respectively. Dr. James Stewart founded scholarships in Anatomy, Medicine and Surgery to the capital value of £26,000. The Hon. Francis Ormond contributed £20,000 to the University as an endowment for the Chair of Music and for scholarships in music, as well as benefactions to Ormond College amounting to considerably over £100,000, and the late Dr. F. Haley left £49,000 for medical research. Bequests of approximately £20,000 each for general purposes were made by Mr. John Hastie and Mr. C. D. Lloyd, while similar sums were bequeathed by the late Sir John Higgins for research scholarships in industrial chemistry and bio-chemistry as related to the pastoral and agricultural industries and by Mr. R. J. Fletcher for medical research. The late Mr. E. Truby Williams gave £52,000 for the Conservatorium of Music, the library and general purposes. Mr. Russell Grimwade has given £40,000 of a premised gift of £50,000 for a new school of bio-chemistry, and the trustees of the W. L. Baillieu Trust have given £36,000 as a first instalment of a gift of about £100,000 with which a new library will be built. The Melbourne *Herald* gave £30,000 to establish the first Chair of Fine Arts in Australia.

From the estate of the late Mr. W. P. Greene £23,000 has been received for cancer research and from the Baillieu family £20,000 for the erection of a Metallurgy Research School. A bequest of £22,500 from the estate of late Dr. Georgina Sweet will provide three fellowships.

Queensland University, to 30th April, 1947, had received £246,046 from the McCaughey estate and £40,051 from the Walter and Eliza Hall Trust, while the Hon. T. C. Beirne gave £20,000 in 1935 for the endowment of a Chair of Law in Queensland. The permanent site for the University and other land valued at £62,000 were presented by Dr. and Miss Mayne. In 1937 the trustees of Mr. W. Robertson bequeathed £19,400 for the Chair of Agriculture.

The chief benefactors to the Adelaide University have been Sir Thomas Elder, £100,000; Sir George Murray, £96,000; Sir Langdon Bonython, £72,000; Miss M. T. Murray, £45,000; Mr. T. E. Barr Smith, £45,000; Dr. F. Lucas Benham, £44,000; Mrs. R. F. Mortlock and J. T. Mortlock, £32,000; Mrs. Jane Marks, £30,000; Edward Neale, £27,000; family of John Darling, £25,000; Sir William Mitchell, £25,000; Mrs. A. M. Simpson and Miss A. F. Keith Sheridan, £21,000; and R. Barr Smith and family, £20,000. Several valuable properties, in addition to shares which realized £58,450, were also bequeathed to the University by Mr. Peter Waite, the total value of the bequest being estimated at £100,000.

Under the will of Sir Winthrop Hackett the University of Western Australia received £425,000 for the erection and maintenance of University buildings and for studentships, scholarships, bursaries and other financial help for deserving students. In addition, an endowment of £18,000 was made in 1913 for the Hackett Chair of Agriculture. The late Robert Gledden bequeathed an estate valued at £60,000, particularly to provide travelling scholarships, and numbers of bequests, aggregating about £55,000, have been made to the University mainly for the establishment of a medical school or research in connexion therewith.

6. **University Expenditure.**—The principal item of disbursements under the general University activities consists of the salaries of teaching and research staff representing 69.4 per cent. of the total compared with 70.8 per cent. in 1945 and 69.1 per cent. in 1944. The following table gives the expenditure, excluding capital expenditure on buildings, during the years 1944 to 1946 :—

UNIVERSITIES : EXPENDITURE, GENERAL ACTIVITIES, 1946.

University.	Administration.	Maintenance of— Teachers' Department.	Premises.	Libraries.	Other.	Total.
	£	£	£	£	£	£
Sydney	41,397	388,645	35,201	12,856	24,246	502,345
Melbourne	36,088	262,501	42,135	13,222	50,799	404,745
Queensland (Brisbane) ..	15,933	123,551	9,724	4,246	18,080	171,534
Adelaide	8,277	140,218	15,176	7,866	33,249	204,786
Western Australia (Perth)	10,359	63,050	12,803	4,191	8,463	98,866
Tasmania (Hobart) ..	5,976	24,980	3,042	3,295	4,204	41,497
New England University College	4,561	14,235	4,419	1,285	18,292	42,792
Canberra University College	1,973	8,142	291	396	132	10,934
Total 1946 ..	124,564	1,025,322	122,791	47,357	157,465	1,477,499
1945 ..	81,318	729,983	81,226	36,500	102,556	1,031,583
1944 ..	72,431	603,764	75,867	34,440	86,815	873,317

7. **Extra-University Activities.**—(i) *General.* The tables shown in paragraphs 4 and 6 relate to the general University activities while those following show the financial position of all extra-university activities. The heterogeneous character of the items in the statements for these activities varies to such extent between the Universities that comparisons of the totals are misleading, but they include all items excluded from the general statement and give useful information within limits.

(ii) *Receipts, Extra-University Activities.* The following table shows the main receipts for the years 1944 to 1946 :—

UNIVERSITIES : RECEIPTS, EXTRA ACTIVITIES, 1946.

University.	Government Grants.	Interest, Rent, and Dividends.	Candidates' Fees, Public Examinations.	Special Research Grants.	Other.	Total.
	£	£	£	£	£	£
Sydney	12,223	43,824	17,378	36,497	3,940	113,862
Melbourne	13,537	67,192	44,831	24,485	(*a*)75,434	225,479
Queensland (Brisbane)	1,700	5,306	17,786	11,753	4,755	41,300
Adelaide	5,250	12,005	9,983	17,812	3,466	48,516
Western Australia (Perth)	..	18,592	10,782	8,222	(*b*)15,052	52,648
Tasmania (Hobart) ..	..	589	2,415	6,254	4,181	13,439
New England University College ..	..	..	..	..	39	39
Canberra University College	2,520	179	..	474	..	3,173
Total 1946 ..	35,230	147,687	103,175	105,497	106,867	498,456
1945 ..	30,269	96,765	81,390	96,835	84,693	389,952
1944 ..	15,227	93,587	76,077	92,816	74,743	352,450

(*a*) Includes receipts, Superannuation Fund £24,579, and University Press, £20,668. (*b*) Includes University Press, £7,566.

(iii) *Expenditure, Extra-University Activities.* The following table shows the main items of expenditure for the years 1944 to 1946 :—

UNIVERSITIES : EXPENDITURE, EXTRA ACTIVITIES, 1946.

University.	Salaries, Fees, etc.	Public Examination Expenses.	Adult Education and Extension.	Special Research Expenses.	Other.	Total.
	£	£	£	£	£	£
Sydney	27,668	..	10,813	40,564	21,523	100,568
Melbourne	22,039	24,892	9,600	35,894	(a)75,254	167,679
Queensland (Brisbane)	..	17,971	3,404	12,313	5,464	39,152
Adelaide	5,344	7,047	2,386	13,171	15,566	43,514
Western Australia (Perth)	..	9,771	7,588	8,222	(b)31,329	56,910
Tasmania (Hobart) ..	..	2,004	..	6,111	4,423	12,538
New England University College ..	..	..	39	..	..	39
Canberra University College	..	..	..	566	(c) 2,735	3,301
Total 1946 ..	55,051	61,685	33,830	116,841	156,294	423,701
1945 ..	35,421	55,187	29,616	101,702	97,611	319,537
1944 ..	27,918	50,237	23,467	89,738	93,686	285,046

(a) Includes University Press, £23,185; Superannuation Fund, £14,964. (b) Includes Scholarships £24,121, and the University Press, £7,021. (c) Includes Scholarships, £2,520.

8. **University Extension.**—Some account of the initiation and progress of university extension is given in preceding Official Year Books (see No. 22, p. 446).

9. **The Australian National University.**—By the Australian National University Act No. 22, 1946 (assented to 1st August, 1946, proclaimed to commence 7th February, 1947) provision is made for the establishment and incorporation of a University in the Australian Capital Territory. The University is to consist of a Council of not more than 30 members (of whom two are to be elected by each House of the Parliament, not more than eight to be appointed by the Governor-General, not more than nine to be elected by Convocation, three to be elected by the teaching staff and three by the students, together with the Vice-Chancellor and co-opted members), and Convocation, which is to consist of the graduates of the University and other persons admitted as members. Until the Council is constituted in accordance with the Act, there is an Interim Council appointed by the Governor-General, which is authorized to take such steps as are considered necessary for the establishment of the University and the commencement of its functions. Provision is made for the appointment of a Vice-Chancellor, in the first instance by the Governor-General and therafter by the Council. Professor D. B. Copland has been appointed as the first Vice-Chancellor.

The following members of the Interim Council were appointed :—

> Professor R. C. Mills, Director of the Commonwealth Office of Education and Chairman of the Universities Commission (Chairman); Mr. J. D. G. Medley, Vice-Chancellor, University of Melbourne (Vice-Chairman); Professor Eric Ashby, Professor of Botany, University of Sydney (now of University of Manchester); Professor K. H. Bailey, Commonwealth Solicitor-General; Dr. H. C. Coombs, Director-General of Post-War Reconstruction; Mr. C. S. Daley, Assistant-Secretary, Department of the Interior; Sir Frederic Eggleston, formerly Australian Minister to China and to the United States of America; Sir Robert Garran, formerly Commonwealth Solicitor-General, and Chairman of the Council of the Canberra University College; Mr. H. J. Goodes, Assistant Secretary, Commonwealth Treasury; Sir David Rivett, Chairman of the Council for Scientific and Industrial Research; and Professor R. D. Wright, Professor of Physiology, University of Melbourne.

The Registrar is Mr. R. G. Osborne.

The University is required by the Act to provide facilities for post-graduate research, including a School of Medical Research (to be known as the John Curtin School of Medical Research), and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. It may also provide facilities for university education generally, for the incorporation in the University of the Canberra University College, and for specialist training for officers of the Public Service.

The Act provides that after the expiration of the period of five years from 1st July, 1946 (during which such funds as may be required are to be provided by the Treasurer), the University is to receive an annual grant of £325,000.

The Interim Council has since its appointment been engaged in the preparatory work in connexion with the establishment of the University and has in addition granted a number of Research Fellowships, and invited to Australia distinguished overseas scientists (including Professor M. Oliphant of Birmingham, and Professor R. W. Gerard of Chicago), who have conducted seminars in Canberra for research workers and visited the other Universities. The Council has also established an Academic Advisory Committee in England, consisting of Sir Howard Florey, F.R.S., Professor Raymond Firth, Professor W. K. Hancock and Professor M. Oliphant, F.R.S., which advises the Council in connexion with the establishment of the research schools.

While the building programme is being planned and executed, the Council will appoint research scholars for training in appropriate universities and research institutes both in Australia and overseas.

10. **Canberra University College.**—The Canberra University College Ordinance of the Australian Capital Territory made possible the establishment of the college, which was founded in 1930. The ordinance provides for a council consisting of ten members. The College is associated with the Melbourne University, through a temporary regulation, by virtue of which the University recognizes the teaching of the College, examines students and confers degrees or awards and diplomas. Lecturers are appointed by the College and approved by the University.

In addition to the University of Melbourne courses the College conducts a full-time course in Diplomatic Studies extending over two years. The course is specially directed to the needs of diplomatic cadets appointed to the Department of External Affairs, but a few qualified students, other than diplomatic cadets, are admitted. In 1947 the students numbered 301, while the teaching staff consisted of nine full-time and sixteen part-time lecturers.

11. **New England University College.**—New England University College, comprising a Faculty of Arts and Economics and a Faculty of Science, is governed by the University of Sydney. It is situated at Armidale, on the Northern Tablelands of New South Wales. The College is almost entirely residential. The original university building stands in 183 acres of land and was presented to the University College by Mr. T. R. Forster in 1937. The Government of New South Wales bore the expense of converting it to its present use. Two large additional buildings providing lecture theatres and laboratories have already been erected and others are planned. Lectures began at the College on 14th March, 1938. Students wishing to proceed to degrees in the Sydney Faculties of Medicine, Veterinary Science and Agriculture and Economics may take the earlier courses at the College. In 1946 there were 24 lecturers, including four part-time, eight demonstrators and tutors of whom six were part-time, and fifteen honorary lecturers. One hundred and seventy-seven students were taking courses leading to degrees, 25 students were taking diploma courses; of these 37 were studying under the Commonwealth Reconstruction Training Scheme. Extension Board courses were also conducted during the year.

12. **Workers' Educational Associations.**—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. There are now direct grants from all State Governments except Western Australia and Queensland. The particulars of grants for classes and discussion groups organized by the Association and serviced by their respective State Universities in 1946 were as follows :—New South Wales, £15,373, 83 tutorial classes, 107 discussion

groups ; Victoria, £5,906, 51 tutorial classes, 1 " carry on " group and 56 " box scheme " groups and extension work ; South Australia, £2,250, 6 tutorial classes, 22 lecture classes, 4 study circles, and extension lectures at country centres.

Direct grants were made to the Associations for both organizing work and a teaching service as follows :—New South Wales, £4,747, 15 classes, 22 week-end and holiday schools, 14 short courses of public lectures, 98 lectures given to various organizations including W.E.A. clubs ; in Tasmania, £3,700 with 23 classes ; in South Australia the Association receives a grant of £240 for general organizing purposes. In Queensland the Association conducted 4 classes, and has 430 subscribers to the library. It now receives a subsidy from the State Library Board equivalent to one-half of the amount spent on the purchase of books for the library. The Carnegie Corporation has shown its interest in the work, by allotting at various times substantial grants to the Association and to the Universities. The Association's primary interest has been in subjects related to social change such as Industrial History, Economics, Political Science and Sociology. In recent years, however, there has been a substantial increase in the number of classes studying Psychology, History, Literature, Music and Biology. The Universities in New South Wales, Victoria and South Australia co-operate with the W.E.A. in the formation of a joint committee for tutorial classes, which supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. This arrangement may be changed in Victoria in 1947 with the establishment by the State Government of a statutory body to be known as the Adult Education Council, which will take over responsibility for all State supported adult education work.

§ 7. The Commonwealth Office of Education.

1. **Establishment.**—Although, as has been explained elsewhere, education is primarily a concern of the State Governments, the activities of the Commonwealth Government in other directions inevitably brought it into the field of education at a number of points. It thus became necessary to create a permanent Commonwealth authority capable of providing the Government and others with reliable expert advice on the many educational problems that arise. To fulfil this need the Commonwealth Office of Education was established in 1945.

For administrative purposes the Office is attached to the Ministry of Post-war Reconstruction, and at present is accommodated in Sydney. Under the Minister, the control of the Office rests with the Director whose appointment is direct from the Governor-General in Council. By the Education Act, the Director is also *ex-officio* Chairman of the Universities Commission. The administrative staff of the Universities Commission is housed with the Office of Education and shares its facilities. The special work of the Universities Commission is dealt with in the next section of this chapter.

2. **Functions.**—By the Education Act 1945 the functions of the Office of Education are defined as follows :—" (*a*) to advise the Minister on matters relating to education ; (*b*) to establish and maintain a liaison, on matters relating to education, with other countries and the States ; (*c*) to arrange consultation between Commonwealth authorities concerned with matters relating to education ; (*d*) to undertake research relating to education ; (*e*) to provide statistics and information relating to education required by any Commonwealth authority ; and (*f*) to advise the Minister concerning the grant of financial assistance to the States and to other authorities for educational purposes, and shall include such other functions in relation to education as are assigned to it by the Minister ".

3. **Activities.**—Thus the Commonwealth Office of Education maintains no schools and employs no teachers. It advises the Commonwealth Government and its various Departments on educational matters relative to the States and overseas countries. It provides a very useful channel for negotiations between State Departments of Education and the Commonwealth Government; it organizes consultations between education authorities generally.

Information about recent important developments in education is collected continually from many sources within Australia as well as from countries overseas and is disseminated to State Education authorities and others in a number of ways, one of which is the distribution of a bi-monthly publication " Education News ".

General research into educational problems is one of the important activities of the Office. In addition, close attention is being given to special fields of education such as school broadcasting, visual aids to education, and the education of handicapped children. From time to time the results of survey and research work done in the office or sponsored by the office are published in monograph form.

The Office of Education is a Commonwealth authority with which overseas countries may deal on educational questions concerning Australia as a whole. Close contact in international education is maintained through a representative of the Office on the staff of Australia House in London. A very important post-war development in this international sphere is that of the United Nations Educational Scientific and Cultural Organization. The responsibility for implementing the constitution of UNESCO in Australia, and for advising the Government on such matters, rests with the Office of Education. To further the aims of UNESCO twelve National Co-operating Bodies have been set up together with a Co-ordinating Committee. The Office of Education acts as the secretariat of these bodies.

A substantial part of the work of the Office is concerned with fostering the development in Australia of general educational and cultural activities. A series of publications for use as youth and adult education material has been commenced. A fortnightly " Current Affairs Bulletin " is provided at bulk rates to discussion groups and other bodies. Regular " Wall Charts " and other pamphlets are also produced.

§ 8. The Universities Commission.

1. **General.**—The Universities Commission is a Commonwealth instrumentality which was set up at the beginning of 1943 under National Security (Universities Commission) Regulations primarily to achieve the following objects :—(*a*) To advise the Commonwealth Government on questions of man-power insofar as they relate to the training of university students ; (*b*) to arrange for the training of adequate numbers of the graduates for all kinds of national service and to attract able students to the University for such training ; and (*c*) to administer the scheme of financial assistance.

Thus the Commission was concerned with war-time problems. From the commencement of the 1939–45 War the Commonwealth Government had recognized the vital necessity of a continuing flow of properly trained graduates from certain of the faculties of the Universities, particularly from the six faculties of Medicine, Dentistry, Engineering, Science, Veterinary Science and Agriculture. The policy of the Government was to reserve students to commence and continue their studies in these faculties. In 1943 reservation was extended to cover the faculties of Arts, Economics, Law and Architecture.

With the passing of the Education Act 1945 the Universities Commission became associated with the Commonwealth Office of Education. Its revised functions are set out in Section 14 of Part 3 of the Act which is quoted below :—

> " 14. The functions of the Commission shall, subject to the regulations and any directions of the Minister, be—
>
> (*a*) to arrange, as prescribed, for the training in Universities or similar institutions, for the purpose of facilitating their re-establishment, of persons who are discharged members of the Forces within the meaning of the Re-establishment and Employment Act 1945 ;
>
> (*b*) in prescribed cases or classes of cases, to assist other persons to obtain training in Universities or similar institutions ;
>
> (*c*) to provide, as prescribed, financial assistance to students at Universities and approved institutions ; and
>
> (*d*) to advise the Minister with respect to such matters relating to university training and associated matters as are referred by the Minister to the Commission for advice."

With cessation of hostilities, the Commission was no longer called upon to administer the scheme of reservation but added to its functions that of administering training under the Commonwealth Reconstruction Training Scheme insofar as it applies to Universities and similar institutions. The end of war meant a large increase in the number of applicants for university-type training under the Commonwealth Reconstruction Training Scheme.

To deal effectively with the increased number of intending students it was found necessary at the end of 1945 to establish Branch Offices in each of the five main Universities, that is, Sydney, Melbourne, Adelaide, Queensland and Western Australia, and to have a Branch Officer stationed in Hobart. The Branch Offices handle all applications for assistance under both the Commonwealth Reconstruction Training Scheme and the financial assistance scheme and give individual consideration to each case. They work in close co-operation with the Universities.

2. **Financial Assistance.**—(i) *General.* In order to make the best possible use of university facilities, the Commonwealth Government has adopted, through the Universities Commission, the policy of endeavouring to attract able students to the Universities. To this end, various steps are taken to explain to the students leaving school the opportunities available at Universities. Moreover, a scheme of financial assistance has been introduced to assist able students.

Under this scheme, assistance is available (subject to a means test) to enable students to continue their education at Universities and other approved institutions. Originally it was available only to reserved students enrolled in the degree courses of Medicine, Dentistry, Engineering, Science, Veterinary Science and Agriculture. When the scheme of reservation was extended to cover students in Arts, Law, Economics and Commerce, assistance was granted to them also.

Assistance was further extended to cover students at the Western Australian Dental College, students doing courses for the Diploma of Social Studies at the Universities of Sydney, Melbourne and Adelaide, students doing the degree courses in Music at the Universities of Adelaide and Melbourne, students in Almonry at the New South Wales Institute of Hospital Almoners, Sydney, and the Melbourne Institute of Hospital Almoners, Melbourne, and full-time day Diploma students in Science, Engineering and Architecture in Senior Technical Colleges approved for that purpose.

(ii) *Scale of Assistance.* The maximum amount of assistance granted to a student is the payment of all his university fees plus a living allowance of £117 per annum if he is living with a parent, or £156 per annum if he is not living with a parent. In addition, an allowance of up to £10 may be made over the whole course towards the cost of the purchase or hire of necessary instruments. The maximum assistance is payable when the adjusted income does not exceed £250 per annum. For every £10 by which the adjusted income exceeds £250 per annum, the assistance is reduced by £5 4s. per annum.

The adjusted income is ascertained by taking the taxable income of the student and of his parents and by deducting therefrom £50 for each dependent child under sixteen years of age. The assistance is supplementary to any other assistance which a student receives and the Commission deducts from its assistance the value of any scholarship or other award held by a student.

(iii) *Number of Students Assisted.* The following table gives a comparison of students assisted in the various faculties in each University in 1945 and 1946 :—

NUMBER OF STUDENTS ASSISTED IN EACH FACULTY, 1945 AND 1946.

Faculty.	Year.	University.						
		Sydney.	Melbourne.	Queensland.	Adelaide.	Western Australia.	Tasmania.	Total.
Medicine ..	1945	252	120	58	69	3	2	504
	1946	237	106	49	76	7	3	478
Science	1945	194	133	38	75	68	17	525
	1946	157	87	27	58	62	18	409
Engineering ..	1945	124	77	(a) 44	72	64	13	394
	1946	113	68	(a) 56	67	59	9	372
Dentistry ..	1945	68	23	16	12	..	..	119
	1946	77	18	16	15	3	..	129
Agriculture ..	1945	35	25	8	12	15	..	95
	1946	39	20	6	14	18	..	97
Veterinary Science	1945	53	1	..	..	..	..	54
	1946	35	2	4	1	..	..	42
Arts	1945	9	10	7	10	11	3	50
	1946	53	27	9	11	22	4	126
Economics or Commerce ..	1945	14	3	..	..	..	1	18
	1946	14	3	2	1	..	1	21
Law	1945	3	3	..	1	2	2	11
	1946	8	6	..	3	3	2	22
Architecture ..	1945	10	1	..	2	..	..	13
	1946	17	3	..	1	..	..	21
Social Studies ..	1945	16	9	..	6	..	..	31
	1946	11	15	..	8	..	..	34
Total ..	1945	778	405	171	259	163	38	1,814
	1946	761	355	169	255	174	37	1,751

(a) Includes Applied Science and Medical Science.

The number of students assisted in Technical Colleges was 215 in 1945 and 272 in 1946.

3. **Commonwealth Reconstruction Training Scheme.**—(i) *Benefits.* A general description of the Commonwealth Reconstruction Training Scheme is given in section 11 which is devoted to the scheme as a whole. In addition to the normal benefits there described, some further benefits are available to university students.

At the request and the cost of the Commission, Guidance Officers have been appointed to help Reconstruction Trainees, and students are encouraged to consult the Guidance Officers on any of their problems. As they are members of the staffs of the Universities, the Guidance Officers have contacts with the teaching and administrative staffs of the Universities and are able to obtain advice regarding the students' progress and difficulties.

One of the main activities of Guidance Officers has been to arrange for full-time and part-time interim training in the period between the date of discharge and the commencement of the university year. A limited amount of special concurrent tutorial assistance also was arranged in 1945 and subsequent years.

(ii) *Numbers of University and University-Type Trainees.* The following table gives a comparison of the numbers of full-time trainees in the various university-type courses in the various States. It also gives a comparison of the numbers of trainees from the various services in the various courses :—

NUMBERS OF RECONSTRUCTION TRAINEES WHO HAD COMMENCED FULL-TIME UNIVERSITY-TYPE COURSES UP TO 27th DECEMBER, 1946.

Course.	State.						Service.			
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Army.	Navy.	Air.	Total.
Agriculture ..	121	65	18	24	23	4	87	18	150	255
Architecture ..	112	42	17	26	..	..	66	13	119	(*a*) 198
Arts	343	257	46	59	126	10	328	62	451	841
Dancing ..	19	6	..	..	1	..	12	1	13	26
Dramatic Art ..	1	8	..	..	..	..	3	2	4	9
Dentistry ..	316	104	97	29	17	4	215	43	309	567
Dip. Education ..	14	20	..	..	3	..	22	6	9	37
Economics ..	120	340	31	39	..	11	165	49	327	541
Engineering ..	436	222	129	166	81	18	303	95	654	1,052
Forestry ..	9	4	10	13	..	2	14	8	25	(*b*) 47
Journalism ..	29	9	9	..	..	..	13	11	23	47
Kindergarten ..	11	8	6	1	4	..	13	2	15	30
Law	427	276	91	63	74	25	453	97	406	956
Librarianship ..	13	..	..	..	..	..	8	1	4	13
Medicine ..	611	355	131	136	31	10	577	116	581	1,274
Music	172	113	2	29	12	3	180	26	125	331
Nursing ..	361	262	154	109	103	32	595	46	381	(*a*)1,022
Pharmacy ..	85	106	..	23	..	..	67	10	137	214
Physiotherapy ..	40	35	7	4	..	..	50	7	29	86
Physical Education	19	..	..	1	..	..	5	1	14	20
Science	287	277	99	88	70	18	240	65	534	839
Social Studies ..	34	13	..	17	..	..	24	9	31	64
Surveying ..	..	..	13	..	..	..	6	1	6	13
Teaching ..	508	106	149	16	184	53	426	36	554	1,016
Theology ..	223	126	46	64	17	4	301	22	157	480
Veterinary Science	143	7	18	2	..	4	88	15	71	174
Welfare Officer ..	..	22	..	..	..	..	7	1	14	22
Youth Leadership	..	17	..	..	..	..	5	3	9	17
Others	15	15	..	..	1	1	12	7	13	32
Totals ..	4,469	2,815	1,073	909	747	199	4,285	773	5,165	10,223

(*a*) Includes one at Canberra University College. (*b*) Includes nine at Canberra University College.

In addition, 6,105 reconstruction trainees had commenced part-time courses at 27th December, 1946. Of these, 4,774 were still in training, 728 had completed their courses and 603 had discontinued.

(iii) *University Facilities.* With the influx of students under the Commonwealth Reconstruction Scheme immediate provision had to be made for the alterations and extensions of existing University buildings and for the erection of new ones. Additional equipment also had to be supplied.

The Commonwealth Government offered to provide finance on the following terms and each State and University accepted these terms :—

"(*a*) That the Commonwealth meet the cost in the first instance of erecting essential additional buildings and plant required for Reconstruction Training at Universities ;

(*b*) In the case of temporary buildings or plant of a temporary nature, the assets to remain the property of the Commonwealth and to be disposed of as necessary after the need for their use is ended ;

(*c*) Where the buildings or plant are of a permanent nature the Commonwealth to meet the cost of erection in the first instance so as to ensure expedition on the distinct understanding that the buildings and plant will be taken over by the University on a basis to be determined by agreement between the Commonwealth and State and the University having regard to the permanent value of the buildings and plant to the University ; and

(*d*) The Commonwealth would bear the cost of special internal structural alterations ".

The following table shows the amount of Commonwealth moneys allocated to finance buildings at the Universities :—

University.	Permanent Buildings.	Permanent Alterations.	Temporary Buildings.	Total.
	£	£	£	£
Sydney	191,256	14,238	63,118	268,612
Melbourne	177,725	1,498	14,159	193,382
Queensland (Brisbane)	..	..	4,322	4,322
Adelaide	262,589	..	..	262,589
Western Australia (Perth)	89,247	..	25,069	114.316
Tasmania (Hobart)	11,672	1,500	32,302	45,474
New England University College	..	..	39,180	39,180
Total	732,489	17,236	178,150	927,875

For equipment the following amounts have been allocated :—

University.	Permanent Equipment.	Temporary Equipment.	Gift.	Total.
	£	£	£	£
Sydney	..	..	40,000	40,000
Melbourne	98,015	3,525	..	101,540
Queensland (Brisbane)	109,318	15,271	..	124,589
Adelaide	97,556	7,628	..	105,184
Western Australia (Perth)	42,786	3,513	..	46,299
Tasmania (Hobart)	19,766	..	..	19,766
Total	367,441	29,937	40,000	437,378

The Commonwealth Government agreed to pay the Universities the full cost of teaching all Reconstruction Trainees. The Universities Commission therefore pays each University a subsidy as running costs in addition to fees.

In 1946 the Commission made fee payments to Universities for Reconstruction Trainees amounting to approximately £210,000 and in addition paid subsidies amounting to approximately £235,000.

§ 9. Technical Education.

1. **General.**—Although provision has been made in all of the States for many forms of technical education, the total expenditure figures still indicate a low proportion in comparison with the total educational votes. The rapid expansion of manufacturing industries in recent years, however, is increasing the demand for technically trained personnel, while the technical training by the Department of Labour and National Service and the Commonwealth Reconstruction Training Schemes is being rapidly expanded. (See §§ 10 and 11 following.)

In preceding issues of the Official Year Book an outline was given of the origin and development of technical education in each State (see No. 22, pp. 447–51), but considerations of space preclude the inclusion of more up-to-date information.

2. **Schools, Teachers and Students.**—The numbers of schools, teachers and enrolments of individual students during 1945 are given in the following table :—

TECHNICAL EDUCATION : SCHOOLS, TEACHERS AND ENROLMENTS, 1945.

State.	Schools or Colleges.	Teachers.			Individual Students Enrolled.	
		Full-time.	Part-time.	Total.	Male.	Female.
New South Wales ..	37	498	1,590	2,088	30,940	11,827
Victoria(*a*)	31	975	994	1,969	33,880	10,882
Queensland.. ..	12	92	132	224	7,111	2,938
South Australia ..	19	(*b*)	(*b*)	396	7,998	6,180
Western Australia ..	9	61	179	240	4,372	2,619
Tasmania(*a*) ..	6	58	200	258	2,694	1,195
Total 1945 ..	114	..	..	5,175	86,995	35,641
1944 ..	119	..	..	4,373	80,226	32,494

(*a*) Includes junior enrolments, 9,332 males and 1,525 females in Victoria, and 886 males and 52 females in Tasmania, as teaching staff and expenditure cover both senior and junior sections. (*b*) Not available.

The numbers of individual scholars enrolled during the years 1939 and 1942 to 1945 are given in the table following. In order to make the figures comparable, enrolments at Junior Technical Schools are omitted from the Victorian and Tasmanian figures.

TECHNICAL EDUCATION : INDIVIDUAL STUDENTS.

State.	1939.	1942.	1943.	1944.	1945.
New South Wales ..	37,264	39,381	34,940	39,750	42,767
Victoria	28,844	24,304	27,389	31,533	33,905
Queensland	6,397	6,785	6,659	8,416	10,049
South Australia	9,721	9,768	10,952	12,534	14,178
Western Australia ..	5,673	5,323	5,499	5,417	6,991
Tasmania	1,316	2,073	2,130	2,559	2,951
Total	89,215	87,634	87,569	100,209	110,841

3. **Expenditure.**—The expenditure on technical education in each State for 1945 is shown below :—

TECHNICAL EDUCATION : EXPENDITURE, 1945.

(Including Loan Fund Expenditure.)

State.	Salaries and maintenance.	Equipment.	Buildings.	Total.	Receipts—Fees, etc.	Net Expenditure.
	£	£	£	£	£	£
New South Wales ..	490,121	74,725	100,807	670,594	134,844	535,750
Victoria(*a*)	522,417	39,796	174,726	791,062	131,940	..
Queensland.. ..	98,748	24,902	5,951	129,601	26,240	103,361
South Australia ..	113,268	3,816	8,812	126,656	24,246	102,410
Western Australia ..	54,601	9,854	1,486	65,941	7,896	58,045
Tasmania(*a*) ..	55,131	6,335	3,731	65,197	8,018	57,179
Total 1945 ..	1,334,286	159,428	295,513	1,849,051	333,184	..
1944 ..	1,163,232	125,820	265,818	1,611,150	286,544	..

(*a*) Includes the expenditure on Junior Technical Schools.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is largely financed from loan moneys, the sums provided from this source in 1945 being (the expenditure in 1944 is shown in brackets) :—New South Wales, £66,221 (£63,728); Victoria, £173,422 (£109,251); Queensland, £3,848 (£2,547); South Australia, £5,032 (£14,078); Western Australia, £783 (£10,384); and Tasmania, £1,928 (£4,514).

The expenditure on maintenance for technical education in Australia in 1945 amounted to 4s. per head of population, as compared with 35s. 7d. per head expended on maintenance for primary and secondary education.

§ 10. Commonwealth Technical Training Scheme.

1. **Origin of the Scheme.**—The Commonwealth Technical Training Scheme was originated to provide for the training of civilians and Armed Services personnel to make up the deficiency of skilled artisans for the production of munitions and to meet the demands of the Armed Services for skilled technicians.

In September, 1939, an expert Advisory Committee, representative of the Technical Educational Authorities, the Munitions Department and employers' and employees' organizations, was established and a scheme was developed for the training of additional artisans to meet the requirements of the Department of Munitions and Aircraft Production.

The subsequent development of the Empire Air Training Scheme, and the mechanization of the Armed Forces created a further demand for additional skilled tradesmen and technicians for the Fighting Forces.

In May, 1940, the Commonwealth Government entered into an agreement with the engineering trades employer and employee organizations relating to the dilution of skilled labour in war production factories, and the National Security Dilution Regulations which provided for the training of " Dilutees " and " added tradesmen " were proclaimed.

With the co-operation of the State Education Authorities, the existing facilities of State-controlled Technical Schools and Colleges were made available to their full extent to give intensive courses of instruction to civilians and members of the Armed Forces. Where necessary, these facilities were supplemented by additional machines, and equipment was made available on loan by the Commonwealth.

2. **Administration.**—Prior to February, 1941, the scheme was administered by the Department of Munitions, and after that date by the Industrial Training Division of the Department of Labour and National Service. The main functions of that Department were to organize, co-ordinate, and generally direct the training through the administrative machinery of the State Education Departments and other suitable agencies. Close collaboration was maintained with the Departments of the Navy, Army, Air, Munitions and Aircraft Production in respect of training for these Services and with the Central Dilution Committee in respect of training in civilian dilution trades authorized under the Commonwealth National Security Dilution Regulations. The cost of the training, including financial provision for all additions to premises, equipment and teaching personnel, was met by the Commonwealth Government.

3. **Progress.**—The first class for the training of Servicemen was established on the 18th December, 1939—two and a half months after the outbreak of War—and was quickly followed by the establishment of courses in technical schools and colleges throughout Australia. Training Centres were established in sixty Technical Colleges and in most Centres day and night classes were put into operation. With the entry of Japan into the War, the training programme was increased considerably, and six months later the trainees were completing their training at a rate of over 4,000 per month.

Instruction was given in seventy-eight different types of courses, ranging from Armourers, Cooks, Draughtsmen, and Fitters, to Photographers, Wireless Mechanics and X-ray Technicians. The courses of training varied in length from eight weeks to twenty-four weeks of full-time instruction, depending on the nature of the course and the degree of proficiency to which it was desired to bring the trainee.

4. **Persons Trained or in Training.**—Up to the 30th June, 1947, 119,655 persons had completed a course of training or were undergoing a course of training under the Scheme. The figures for each State and Service are as follows :—

SUMMARY OF TRAINING AS AT 30th JUNE, 1947.

Service.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	A.C.T.	Total.
Navy	17	325	..	137	..	..	..	479
Army	7,199	7,607	6,099	1,165	3,215	300	..	25,585
Air	21,391	24,055	51	15,644	3,726	249	5,223	70,339
Munitions and Aircraft Production	6,223	9,819	2,609	2,433	1,321	533	314	23,252
Total	34,830	41,806	8,759	19,379	8,262	1,082	5,537	119,655

§ 11. Commonwealth Reconstruction Training Scheme.

1. **Object of the Scheme.**—The object of the Commonwealth Reconstruction Training Scheme is to provide the necessary training for-ex-servicemen and women to enable them to become re-established in suitable civilian occupations. Except in the case of living allowances, the provisions for men and women are identical.

2. **Persons Eligible under the Scheme.**—Application for full-time training under the scheme may be made by Servicemen and Servicewomen who have at least six months' service and have been honorably discharged, provided that they come within one of a number of categories, which may be summarized as follows :—

(*a*) Those who because of incapacity due to the war are unable to return to their pre-war occupation. (This category also covers members of organizations affiliated with the Services, such as the Australian Women's Land Army, War Correspondents, Photographers, etc., and members of the Merchant Navy, incapacitated by war service) ;

(*b*) Those who enlisted or were called up on or before their twenty-first birthday. and are suitable for professional or vocational training ;

(*c*) Those who require a short refresher course, or who desire to complete a full-time professional course interrupted by war service, or who contemplated such a course prior to their war service and are suitable therefor ;

(*d*) Those who either have been self-employed prior to enlistment and are unable to resume their former activities, or possess vocational skill now in over-supply, and who in either case can be suitably trained for re-establishment in another occupation ; and

(*e*) Those who have displayed, during their war service conspicuous ability and are suitable for professional or vocational training.

Widows of Servicemen whose death was due to war service, are also eligible for training.

3. **Selection for Training.**—Training under the scheme is not designed as a reward for war service and if a serviceman or woman is already well qualified in a suitable trade or profession, he or she will not be encouraged to train for some new occupation except in special cases. In making selections care is taken to ensure that the applicant is suitable for the desired course of training and that there are reasonable openings or prospects for the profitable pursuit of the calling.

4. **Types of Training.**—The Commonwealth Reconstruction Training Scheme provides three main types of training :—

(*a*) University type (professional) ;
(*b*) Technical type (professional or vocational) ; and
(*c*) Rural Training.

Professional training follows normal lines at a University or similar institution. Vocational training includes all types of trade training usually given at technical colleges or schools. Training covers from 3 to 12 months and is continued until the trainee attains a standard of proficiency equal to an earning capacity of not less than 40 per cent. The trainee is then placed in suitable employment for training "on the job" and receives the normal award rate for adults, the percentage proficiency being supplemented by the Commonwealth Government until the trainee reaches 100 per cent.

Rural training will take the following forms according to circumstances in each case :—

(*a*) Practical training for a period of up to two years on an approved farm ;
(*b*) An intensive course in farm management of about eight weeks duration ;
(*c*) Training at technical training institutions for such vocations as wool classing, meat inspection ; and
(*d*) Courses at agricultural colleges.

5. **Allowances.**—For full-time training, all tuition and examination fees are paid for the trainees, also allowances for books, tools and other essential equipment. Living allowances are paid during training, ranging from £3 10s. per week for a man without dependants. A woman living with parents receives £2 15s. per week while one maintaining herself receives £3 10s. per week. Dependants' allowances are paid to both men and women. Additional allowances are paid where the trainee is required to live away from his or her home town, and 5s. per week is paid to trainees for fares in addition to allowances.

6. **Part-time Training.**—The scheme also makes provision for part-time training up to a limit of £60 allowance to a member with six months' service, if it will improve his or her occupational status and this is given, as far as possible, through Universities and Governmental institutions.

7. **Legal Authority.**—Legal authority for the scheme is contained in the Re-establishment and Employment Act, No. 11, 1945, Part III.

8. **Organization and Administration.**—The Scheme is administered by executive committees within the Ministry of Post-war Reconstruction. The Commonwealth Reconstruction Training Committee as the central committee has the functions of general planning, organization and direction. Membership of this committee comprises representatives of the Ministry of Post-war Reconstruction (Chairman), Repatriation Commission, Universities Commission and the Department of Labour and National Service, and three members appointed by the Minister and drawn from organizations of employers, employees and ex-servicemen.

The detailed administration and execution of the scheme is carried out by Regional Reconstruction Training Committees, of which there is one in each capital city. Associated with the Regional Committee are Professional, Industrial and Rural Sub-Committees made up of employee and employer representatives in the particular calling with a representative of the training authority concerned.

To 30th May, 1947, full-time enrolments have spread over 300 different courses and part-time enrolments over 650 subjects or courses.

The scheme commenced to operate in a limited way in March, 1944, and the number of ex-servicemen and women who had commenced training under the scheme at 30th May, 1947, was as follows :—

NUMBER OF TRAINEES AT 30th MAY, 1947.

Particulars.	Male.	Female.	Total.
Technical Type Training—			
Full-time	30,982	3,808	34,790
Part-time	89,289	9,495	98,784
University Type Training—			
Full-time	12,327	2,187	14,514
Part-time	7,626	639	8,265
Rural Training—Full-time	1,746	16	1,762
Total	141,970	16,145	158,115

§ 12. Business Colleges and Shorthand Schools.

Particulars at the latest available date of privately conducted institutions which give instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. are given in the following table. Owing to the varying methods employed in the States it is not possible to give any comparative figures of enrolment :—

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1945.

State.	Schools.	Teachers.	Average Attendance of Students.	
			Males.	Females.
New South Wales (*a*)	54	331	(*b*) 2,555	(*b*) 5,460
Victoria	20	134	2,201	3,136
Queensland	10	41	128	950
South Australia	10	62	(*c*) 1,484	(*c*) 1,653
Western Australia	12	78	(*b*) 3,533	(*b*) 1,966
Tasmania	3	13	6	198
Total	109	659	9,907	13,363

(*a*) Year 1941. (*b*) Average weekly enrolment ; attendance figures not available. (*c*) Individual students enrolled.

In addition to those shown above for South Australia there were 2,613 males and 169 females receiving instruction from interstate schools by correspondence. Particulars regarding fees received in 1945 are available for Western Australia and Tasmania only, the respective figures being £40,826 and £2,631.

§ 13. Miscellaneous.

1. **Scientific Societies.**—(i) *Royal Societies.* In previous issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State (see No. 22, pp. 454–5). The accompanying table contains the latest available statistical information regarding these institutions, the head-quarters of which are in the capital cities.

ROYAL SOCIETIES : PARTICULARS, 1947.(*a*)

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
Year of foundation ..	1866	1854	1884	1834	1913	1843
Number of members ..	314	225	224	160	189	316
Vols. of transactions issued	79	91	55	68	30	80
Number of books in library	40,143	18,000	3,100	1,000	6,100	21,385
Societies on exchange list ..	314	348	240	269	187	285
Income .. .. £	1,524	712	174	730	377	626
Expenditure .. £	1,269	527	143	730	290	617

(*a*) The Royal Society of Australia, with head-quarters at Canberra, was founded on 25th July, 1930, and received permission to use its title on 14th January, 1931. The members numbered 58 in 1947. Income and expenditure for the year amounted to £31 and £14 respectively.

(ii) *The Australian and New Zealand Association for the Advancement of Science.* This Association was founded in 1887. Its head-quarters are at Science House, Gloucester-street, Sydney, and meetings are usually held biennially within the various States and in the Dominion of New Zealand. The last meeting was held in Perth in August, 1947.

(iii) *Other Scientific Societies.* The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the society to the amount of £67,000, which has been increased by judicious investment to over £85,000. The Society maintains a research bacteriologist and offers annually 4 research fellowships in various branches of natural history. One fellowship was awarded in 1946. The library comprises some 16,000 volumes, valued at about £8,000. Seventy-one volumes of proceedings have been issued, and the Society exchanges with about 240 kindred institutions. The ordinary membership at the end of 1946 was 182.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. **Libraries.**—(i) *Commonwealth.* (*a*) *Parliamentary and National Library.* When the Commonwealth Parliamentary Library was created in 1902, it was recognized that when the Australian Capital was established it would be necessary to have available there, for the use of Members, Government Departments and the public, a library sufficient for their requirements, and therefore wider in scope than a purely Parliamentary Library. The ideal of a great general library was kept in view, and standard works were systematically acquired. At the same time, the first Library Committee conceived the idea of a National Library for the use and benefit of the people of Australia. The policy was therefore pursued of securing, as far as possible, all works and documents connected with the discovery, settlement and early history of Australia, New Zealand and the Pacific Islands.

In 1909 a valuable collection of *Australiana*, comprising about 10,000 volumes and 6,500 pamphlets, maps, documents and pictures—the library of Mr. E. A. Petherick—was acquired. In 1912 a provision was included in the Commonwealth Copyright Act requiring the publisher of every book, pamphlet, etc., printed in Australia to supply a copy free to the library. In the same year the publication of the *Historical Records of Australia* was begun, and 34 volumes were issued before publication was temporarily suspended in 1926. During 1945 arrangements were completed for the microphotographic copying of all material relating to Australia and the Pacific in the Record Office, London. This project, which was interrupted by the war, is being undertaken by the Commonwealth National Library and the Mitchell Library in partnership, and will enable compilation of the *Historical Records of Australia* to be resumed.

The rapid development of the Australian and National sections of the Library, together with the purchase of the Cook manuscripts, persuaded the Library Committee in 1923 that the title "Commonwealth National Library" should be adopted. Consequent upon the transfer of the Library to Canberra in 1927 the policy of dividing the library into two sections was adopted—the Parliamentary reference collection to be housed in Parliament House and the National and Public section in a separate building, both to remain under the one general administration. The erection of the first wing of the permanent National Library building was completed in 1935, and is designed to meet the requirements of University students and the general public, to whom the privileges of the Library have been extended in respect to borrowing as well as reference. The design for the complete building makes ample provision for the housing of special collections and for the proper display of the valuable records of Australian history which the Library possesses. In 1936 a further development in the scope of the National Library was the establishment of an Historical Film and Speaking Record Section.

The work of the National Library was also extended in 1936 as the result of a grant of $7,500 in three annual instalments of $2,500 from the Carnegie Corporation of New York for the establishment of library and reading facilities in outlying Australian Territories. This amount was subsidized by the Commonwealth Government on a £1 for £1 basis. The war resulted not only in the cessation of much of this service, but in the loss of much material in New Guinea, Papua and the Northern Territory. The system is being reconstituted in an enlarged way on the basis of free library service provided by various Commonwealth administration authorities.

In 1940 Gregory M. Mathews, O.B.E., presented to the Library his collection of Australian ornithological works comprising approximately 4,000 items.

To meet the increased demands made on the Library by Government Departments and war authorities, and because many departments are in Melbourne, the library opened a liaison office there in 1942. Since April, 1946, the work has been undertaken by the Melbourne office of the Department of Post-war Reconstruction.

Consequent on the report of the War Archives Committee appointed by the Prime Minister in 1942 the Library was created a provisional archives repository for administrative records of the non-service departments, and the War Memorial for those of the Services.

During the war overseas information libraries were established in six countries, those in London and New York being administered by trained officers of the Library. In 1946, following an agreement between the Departments of External Affairs, Information, and Commerce and Agriculture, the Library undertook to provide information and reference libraries for all overseas posts where there was official Australian representation. The amount provided for these services has risen from £500 in 1944 to £2,500 in 1946, the number of overseas libraries having increased from two in 1944 to thirty in 1947.

With the establishment of the National Film Board early in 1945, the National Library became a central library and distributing agency for educational and documentary films. Films to the value of £5,000 have been ordered from Great Britain and the United States, and a provisional catalogue of known films at present in Australia has been issued.

The number of volumes in the National and Parliamentary collections was, at the end of June, 1946, 211,653, the outstanding feature of the National section being a unique collection of Captain Cook manuscripts, while the Parliamentary section contains an extensive series of official publications of Great Britain, the Dominions, and foreign countries. The following publications are issued by the Library :—Historical records of Australia—34 volumes, 12s. 6d. per volume ; Parliamentary Handbook and record of elections—ten issues, 10s. 6d. per volume ; Annual catalogue of Australian publications—ten issues, 2s. per volume ; Select list of representative works dealing with Australia (reprinted from the Official Year Book)—ten issues ; Australian Public Affairs Information Service : Subject index to current literature (monthly).

Training of librarians has been undertaken by the Library since 1939, and there is now a formal course for departmental and other librarians, lasting approximately 39 weeks.

(*b*) *Patent Office Library.* The free library attached to the Commonwealth Patent Office, Canberra, contains over 56,000 volumes. Patent specifications of inventions are received from the principal countries of the world, together with official publications dealing with Patents, Trade Marks and Designs. A wide range of technical literature and periodicals is available.

(*c*) *Other Departmental Libraries.* Several Commonwealth Departments in Canberra now have libraries. The following Departments have specialized collections in their own fields, and in addition draw largely on the National Library :—Attorney-General's Department, Australian War Memorial, Commonwealth Bureau of Census and Statistics, Department of Commerce and Agriculture, Department of External Affairs, Department of Health and Department of Trade and Customs. Libraries established in various war-time departments have functioned chiefly as reference and borrowing agencies, having very small book collections of their own.

For the past few years the library of the Department of Commerce and Agriculture has had its main activities in Melbourne, where important sections of the Department were located in the war years. The Department of Labour and National Service has its main library in Melbourne, and a branch library in Sydney. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services and Postmaster-General's Department. The library of the Commonwealth Office of Education was begun in Sydney during 1945.

(*d*) *Council for Scientific and Industrial Research.* In addition to the library at the head office at East Melbourne, the Council for Scientific and Industrial Research now has libraries of varying sizes attached to each of its Divisions, Laboratories and Sections. Of these, there are six in New South Wales, six in Victoria and one in South Australia. The head office catalogue records all material held in branch libraries.

(ii) *States.* Library activity has developed to a marked degree in recent years, and in five States legislation has been passed to increase the scope and usefulness of library service.

(*a*) *Metropolitan Public Libraries.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favorably with similar institutions elsewhere in the world. The following statement gives the number of volumes in the Public Library of each capital city at 30th June, 1946 :—

METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1946.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Canberra(*a*)	211,653	..	(*b*)	211,653
Sydney	(*c*) 435,589	(*d*)	110,935	546,524
Melbourne	551,839	77,906	13,739	643,484
Brisbane	46,137	..	..	46,137
Adelaide	205,638	9,821	(*e*) 35,334	250,793
Perth	175,504	..	(*f*) 26,954	202,458
Hobart	26,155	12,749	(*g*) 27,327	66,231

(*a*) Includes Parliamentary section. (*b*) Books are lent to libraries or students throughout Australia whenever necessary for research work. (*c*) Includes 143,590 volumes in the Mitchell Library. (*d*) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At 31st December, 1946, the books numbered 67,519. (*e*) Includes 5,287 volumes in Children's Branch and 15,527 in Children's Box Service. (*f*) Includes 8,449 volumes in the School Libraries Branch. (*g*) Includes 13,763 volumes in the Children's Branch.

(*b*) *New South Wales.* The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act, 1939, which was fully proclaimed as from 1st January, 1944. The Library Board was fully constituted in 1944, and came into effective operation in September of that year. Sixty-one local authorities have adopted the Library Act, and during 1946 spent £40,699 on their libraries from rates, as well as £19,267 received in subsidy. This represents in all 2s. per head for 24.72 per cent. of the State's population. There are 36 libraries being operated by 48 councils.

The State Library has been housed since 1942 in a new building, whose reading room provides seating accommodation for 500 persons, and has 50,000 volumes in open access. Within four years, however, the old building had to be reoccupied in part owing to lack of space caused by the Library's extended functions.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central book buying and master cataloguing service for departmental libraries, and municipal and shire libraries constituted under the 1939 Act.

The Library School, which was established in 1939, has increased rapidly in numbers, until in 1946 the number of students reached 60. Students are trained in librarianship and are prepared for the examinations of the Australian Institute of Librarians.

In 1943 the Banks Memorial Trust was set up to report on the best use of funds which had accumulated since 1905. The government has approved of a memorial at Kurnell, and of the publication of the Banks Papers, a project which will be undertaken by the State Library in the next two or three years.

The State Library has undertaken to reorganize the libraries of the University Tutorial Class and the Workers' Educational Association, and all class libraries, discussion notes, and gramophone records for university tutorial classes are circulated from the State Library.

The State Library grant, after being unchanged for about twenty years, has been increased by £500 in each of the last two years, while the vote for the Country Circulation Department has nearly trebled. In connexion with the Country Circulation Department it may be noted that books are forwarded on loan to State schools, to Schools of Arts and to individual students. During 1946–47, 78,227 books were lent to small State schools, 13,791 to Schools of Arts and small country libraries, while 43,753 reference works were lent to individual country students.

The Mitchell Library in Sydney of more than 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia and the Southern Pacific, and valued at £100,000, was bequeathed to the trustees of the Public Library in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testators stipulated that the regulations of the British Museum were to be adopted as far as was practicable, hence the library is the resort of specialists. There are now 143,590 volumes in the library in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

In Newcastle, Dr. Roland Pope has given his collection, worth £10,000, which is being housed temporarily at the School of Arts until a reference library is built.

Other important libraries in New South Wales are the Australian Museum, 32.025 volumes; Teachers' Colleges, 73,063; Technical Colleges, 20,846; Public Schools (Primary only), 583,996; Railways' Institute, 146,969; Road Transport and Tramways Institute, 39,134; and the Cooper Library of the New South Wales Public School Teachers' Federation and the library at the National Herbarium, each of 10,000 volumes. At 30th June, 1946, the Parliamentary Library contained 95,990 volumes.

(c) *Victoria.* A Library Service Board was appointed in 1940 to inquire into the adequacy of existing library service and prepare plans for development. In November, 1944, it produced a comprehensive report, which recommended the establishment of a State Libraries Board, and suggested a plan for State financial aid. This has been implemented by the passing in December, 1946, of the Free Library Service Board Act, and the establishment of a Free Library Service Board of nine members representing the Public Library of Victoria, municipalities within and outside the metropolis, the Library Association of Victoria, the Education Department, the Victorian Branch of the Australian Institute of Librarians, and the Government itself. The functions of the Board are to assist in the organization and promotion of free library services by municipal and other authorities, to register libraries, recommend the allocation of grants, promote library service in State schools, and to provide advisory services to registered free libraries and associated institutions. The Act empowers the Public Library of Victoria, after consultation with the Board, to establish a school for the training of librarians, and to conduct examinations in librarianship.

Present library service in Victoria is for the most part confined to Mechanics' Institutes, which are not largely effective apart from those at Geelong and Ballarat. Several excellent municipal libraries exist in the metropolitan area.

The Government makes a grant of £5,500 to country libraries, distributed as follows:—Each applicant library receives £10 10s.; a further grant of £2 for £1 is made to libraries which receive grants from their own municipal authorities, while £1 for £1 is granted for local donations. The maximum amount granted to any library is £200. The main condition is that the library make a certain number of books (not a fixed number, and not necessarily all its books) freely accessible to the public. The subsidy of £1 for each £1 donated is reckoned on the total donations received, even if they are in very small individual amounts.

To assist in the training of librarians a course of eleven weekly lectures was given in 1945, with an attendance of 80. A vacation school, primarily for teachers, held in May, 1945, had an attendance of 80, while 154 applications were received for a course of weekly lectures in 1946 to prepare candidates for examinations of the Australian Institute of Librarians. The Victorian Association of Special Libraries and Information Services held a course of 30 lectures during 1946 for specialized library work.

Two bibliographical works issued recently in Victoria are a union list of medical periodicals in Melbourne hospitals and libraries, compiled by the staff of the University Library, and a list of periodicals held by all branches of the Council for Scientific and Industrial Research.

With the passing of the Public Library Act 1944, the Public Library of Victoria was separated for administrative purposes from the National Gallery and the Museum, and is now controlled by a Board of seven members concerned with the Library only. The Library provides reference services with a collection of some 550,000 volumes, 2,500 current periodicals and 450 current newspapers; lending services to metropolitan borrowers; country lending services to individual readers throughout the State; and travelling library services by a box system to rural and provincial libraries.

The Reference Library reading room ranks amongst the finest in the world. It was opened in 1913 and has a diameter and height of 114 feet, and is capable of seating 320 readers at a time, with an additional 50 readers in a special Art Room. The Library is particularly strong in Australiana, early and fine modern printing, English county records and genealogy, Shakespeariana and the fine arts. Associated with the Reference Library is the Victorian Historical Collection containing 13,000 documents, maps, paintings and other items illustrating the history of the State.

(*d*) *Queensland.* The Libraries Act 1943 constituted a Library Board "to attain efficient co-ordination and improvement of the library facilities of the State with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally throughout the State". To the Board which has been appointed are entrusted the control and management of the Public Library and of branches which, under the Act, may be established in various parts of the State by the Governor-in-Council. It is expected that when the Act, which also provides for the establishment of library services by local authorities and for the preservation of public records, has been fully implemented the library system of the State will be well organized and of high standard.

During the war the Public Library maintained its position as a centre of adult education by co-operating with the Army Educational Services in supplying books to members of the forces.

Country readers may obtain the loan of educational books from the Public Library, while the organization of the Schools of Arts in many parts of the State under the auspices of the Schools of Arts Association has led to an increase in their activities. An annual government grant of £500 is made, and the annual issue is about 15,000 volumes.

The Queensland Book Club arranges for books to circulate direct from one country reader to another instead of being returned to head-quarters each time. A grant of £300 for 1946–47 was made by the Library Board.

The John Oxley Memorial Library was established under the terms of a Declaration of Trust dated 26th August, 1926. The principal function of the Library is to promote the study of Queensland authors of literature relating to Queensland. Since its opening in April, 1934, it has grown from a few hundred items to over 30,000. Originally financed by funds collected at the centenary of Brisbane's settlement in 1823, the library has for some years received government assistance. It is at present housed in the Public Library.

(*e*) *South Australia.* Following the Price Report of 1937, which stressed the need for a free lending service for metropolitan and country readers, and suggested the establishment of a State Libraries Board, the Public Library of South Australia was separated from the Museum and Art Gallery early in 1940 and became a government department, administered by a Principal Librarian and a Libraries Board.

In March, 1946, the greater part of the Library was thrown open for free public borrowing. Over 12,000 borrowers have been enrolled and books are being lent at the rate of about 160,000 volumes a year.

The Library's Country Lending Service, begun in 1938, has registered 11,395 borrowers, including children, and has built up its collection from 4,000 to 16,510 volumes for adults and 17,245 books for children. In addition 629 schools use the box service, 73,224 books being issued during 1945–46.

A Research Service, established in 1942, receives about 300 inquiries per month. It supplies lists of references, and arranges for borrowing of books and periodicals selected from those lists as well as books and photostats procured from interstate and overseas libraries. The service has an extensive trade catalogue collection.

During the year ended 30th June, 1946, books added to the reference library numbered 2,311, making a total of 205,638. In addition there were 7,505 in the Symon Library, 14,520 in the Country Lending Service, 5,287 in the Children's Library, 15,527 in the Children's Box Service, making a total of 248,477 at 30th June, 1946.

In 1921 the Archives Department of the Public Library of South Australia was established for the collection of original South Australian historical material. Legislation has been passed forbidding the destruction of government documents without reference to the Libraries Board. Considerable use is made of the collections, which on 30th June, 1946, consisted of 356,350 documents, 20,015 views, and 1,668 maps.

The Institutes Association in 1945 comprised 256 suburban and country libraries with 715,000 volumes.

(*f*) *Western Australia.* During 1944 the Government appointed a provisional committee to report on the question of establishing free lending libraries in country centres. The scheme outlined in its report of January, 1945, was accepted, and a permanent Country Free Lending Libraries Committee established. In order to commence a library service for rural areas £1,000 was placed on the estimates for 1945 and 1946, funds being made available on a £1 for £1 basis up to £50. By July, 1945, eight such libraries had been started, and by 1947, 38 libraries were receiving aid under the scheme, which is worked through the Municipalities and Road Boards. In each case the local authority makes its own arrangements for the supervision and lending of books.

In 1945 an Archives Branch was established at the Public Library, through which historical material is able to be collected, indexed and made available to the public. Also, the collection of the Western Australian Historical Society is being housed at the Public Library.

An Adult Education Library, in existence for the past ten years, reaches readers in metropolitan and country areas. A Free Library Movement, with a provisional committee formed in 1945, aims at free library service in the metropolitan area.

(*g*) *Tasmania.* Library service in Tasmania has expanded rapidly during the past few years. The second annual report of the Tasmanian Library Board, presented to Parliament in 1945, stated : " Tasmania is now contributing to the upkeep of its library system on a scale exceeding that of any other State in Australia ". In just over two years the amount expended on free library service rose from 4d. to 2s. 1d. per head of population, and during 1944–45 an additional 9d. per head was contributed for additional children's library services. Municipalities representing 80 per cent. of the population now have free libraries or book stations.

Under the Libraries Act 1943, the Tasmanian Library Board was constituted, and the State Library of Tasmania was established on 1st January, 1944. The Board, in addition to administering the State Library head-quarters in Hobart, is responsible for the extension of library services throughout the State and for the control of State aid. Municipalities adopting the Act spend the proceeds of local rates on library premises, salaries and maintenance, and books for permanent retention. State aid is provided in the form of books of a value equal to the amount collected in rates, which are exchanged at intervals. Only in Launceston is State aid given in cash. The Launceston City Council now contributes approximately £2,100 per annum, and a like amount is received in State aid. Since the library became free under the Act, membership has increased from 1,000 to 10,000. The newly established children's library has enrolled over 2,300 members in a few months.

The State Library conducts regular showings of documentary films and has assumed responsibility for the extension of these programmes throughout the State. It arranges, on its own behalf or in association with other bodies, winter recitals of recorded music and other extra library and adult education activities such as summer vacation schools, lectures, library weeks in country centres, puppetry demonstrations, etc.

(iii) *University Libraries.* The libraries of the Australian Universities perform two important functions in Australian life and development; they provide material not only for the education of graduates and undergraduates, but for scholars, research workers and practical investigators all over the continent, since no genuine student is refused access to them. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries, whose resources they are thus able to supplement. They lend to one another and to State and private institutions as well as to individual investigators, and they both lend to and borrow from the public and scientific libraries. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professional staff. In size the Library of the University of Sydney is the third in Australia, and the Libraries of the Universities of Adelaide and Melbourne are respectively seventh and eighth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; it is impossible to give borrowing statistics, as they differ too widely to be comparable without much explanation.

UNIVERSITY LIBRARIES, 1946.

University.	Volumes.	Accessions during year.	Expenditure.
	No.	No.	£
Sydney	292,793	6,244	12,856
Melbourne	139,999	5,155	10,796
Queensland	85,942	2,074	4,246
Adelaide	149,063	4,995	8,808
Western Australia	75,487	2,947	4,[illegible]91
Tasmania	57,211	3,011	3,295
New England University College	12,275	913	1,285
Canberra University College	3,967	674	396

The first books were bought for the Library of the University of Sydney as early as 1851; only since 1910, however, has it possessed a building of its own. It is named after its principal benefactor, Thomas Fisher, who bequeathed to it in 1885 the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which since the beginning of 1941 about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks; all readers are encouraged to borrow freely. The Library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides a medical branch, there are a number of departmental libraries.

Early in 1854 the Council of the University of Melbourne made its first allocation for books, but the Library was housed in temporary and unsatisfactory quarters for a number of years, and consequently growth was slow and complaints were frequent. In recent years the university authorities have treated the Library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is one of the most pressing needs of the University. The W. L. Baillieu Trust has given £36,000 as the first instalment of a £100,000 gift with which a new library will be built. All the books are accessible on open shelves and though the Library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The Library is administered from the centrally situated general library; there is a large medical branch library specially rich in periodicals, and smaller branch libraries are accommodated in some of the science departments.

The Library of the University of Queensland began 33 years ago with £3,000 worth of books, £2,000 having been raised by public subscription and £1,000 granted by the Government. At present it shares a building with a science department. There are several departmental libraries.

The Adelaide University Library bears the title of its original benefactor, Robert Barr Smith, who, with members of this family in and after 1892, gave the University about £50,000 for library purposes. Some 20,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks provide accommodation for about 100,000 volumes, and additions now planned will be capable of housing a further 500,000. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are medical and law departmental libraries. The medical library has on permanent loan the collection of the Institute of Medical and Veterinary Science, and also incorporates the library of the British Medical Association (South Australian Branch).

In the University of Western Australia the first permanent library staff was not appointed until 1927. Provision of permanent library accommodation was not possible when the university moved to its present site, and space and facilities have consequently been inadequate. Extensions to the temporary quarters are in progress. The whole collection, consisting of about 80,000 volumes, is accessible on open shelves, and there are several departmental libraries. A special feature is the use made of student co-operation.

The Library of the University of Tasmania was founded in 1893, but for many years it comprised little more than a collection of text-books. In 1913 a substantial increase of funds was allotted and important gifts were received. In 1919 it was organized for the first time in accordance with modern library practice. A full-time librarian was appointed for the first time at the end of 1945, and the staff increased during 1946 from two to seven. Although accommodation for both books and readers has been more than doubled, space is still an acute problem and plans are being prepared for a new building. The grant from University funds for books and periodicals has been doubled, and an additional special grant is being provided by the Government to fill some of the more serious deficiencies in the collection. The Library is now providing a cataloguing service for the library of the Royal Society of Tasmania.

The New England University College Library was founded in 1938, and bears the name of its first benefactor, Sir William Dixon. At the end of 1946 it contained some 12,000 volumes mainly on open shelves.

The Canberra University College Library was established in 1938. At the end of 1946 it contained 3,967 volumes, which are on open shelves; reference books may be borrowed.

(iv) *Children's Libraries and School Libraries.* A survey conducted early in 1946 revealed that only a small percentage of children was being catered for by adequate library service. The effective use made of the few existing children's libraries is proof that the growing interest being taken in this branch of library work will be well rewarded.

During November, 1945, a Children's Book Week was held for the first time in several States, to stimulate interest in children's reading.

(*a*) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. Three formerly independent children's libraries at Mosman, Wollongong and Moss Vale are now departments of municipal and shire libraries and have greatly increased budgets.

From 1937–38 school library work has been fostered by the State Library in co-operation with the Education Department. A "Model School Library" was established, and vacation classes for teacher librarians are held. To date these classes have been attended by 409 teachers and about 30 voluntary children's librarians. Books are circulated to 24 school libraries.

(*b*) *Victoria.* Since 1943–44 children's libraries have shared a grant of £500 between them, the number participating in 1945 being 27.

The Education Department has an annual grant which it distributes among approximately 1,000 schools. In addition, the Government subsidizes the purchase of approved books for school libraries on a £1 for £1 basis, with a maximum of £25. During 1945–46 the total government contribution was £5.362. A State Schools' Library Advisory Committee has been set up by the Education Department to advise on all matters pertaining to school libraries, and two teachers underwent a full course of library training during 1946 in order to be able to direct and supervise library service within the Department.

In several country districts circulating group libraries have been established, financed by school committees and municipal authorities. Boxes of books are despatched to each school in the group, usually at the commencement of the school term. Financed by a bequest by the late William Gillies, a scheme of circulating libraries for schools, particularly remote ones, has been operating for some years. In 1945, 38 groups, each comprising three schools, were operating under this scheme.

The Kirby survey of secondary schools, 1945, revealed that only 5 per cent. have satisfactory libraries, and 50 per cent. are without libraries or merely possess collections of books. Most of the larger government and private schools are making an effort to establish better libraries.

(*c*) *Queensland.* The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis. The subsidy was suspended from 1931 to 1943.

In 1937 a system of Circulating Supplementary Readers was commenced. Books are graded for age levels and are moved from school to school, sufficient copies of each book for a whole class being sent, and reading being done in school. There are 96,000 such books now in use, the distribution at present being confined to primary schools.

(*d*) *South Australia.* The Children's Library houses 5,000 volumes. Its work lies largely with classes from metropolitan schools which come to study subjects, for simple library instruction, or epidiascope talks. Week-ends and school holidays bring many readers. A lending service has not yet been established. (*See also* Country Lending Service, page 259.)

The government recently recognized the importance of children's reading by appointing an organizer of school libraries.

(*e*) *Western Australia.* A travelling library service to country schools has been operated from the Public Library for some years, and has been extended since 1938 through the Charles Hadley Schools Travelling Library, which has been financed by the teachers of small country schools, with the addition of grants by the government and Teachers' Union. Up to date £920 has been received, and 140 boxes equipped. Children in isolated areas are catered for by books sent out by the State Correspondence Schools Library.

A fortnightly radio talk is given relating to books available from the library, and illustrated outlines and questionnaires are posted to the children in advance. There is as yet no general scheme to serve children in the metropolitan area.

The Federation of Police Boys' Clubs of Western Australia aims at establishing a system of circulating boxes of books at an estimated cost of £10,000, of which £1,500 has already been received.

(*f*) *Tasmania.* Early in 1945 an appeal fund was opened for the establishment of Lady Clark Memorial Children's Libraries. Subscriptions amount to £15,000, and five libraries have been established, while books are in hand for many more. An American librarian trained in children's work has been appointed to take charge.

Practically all State secondary schools in Tasmania have libraries, with full-time trained librarians in three of them. The Hobart High School library contains some 8,000 volumes, and is among the foremost libraries of its kind in Australia. A Schools'

Library Service has been established in Tasmania to assist with loans of curriculum books, 30 at a time, and to provide advice and guidance in the use of books. In primary schools the majority have libraries, and a centrally located school library services many schools with a box system.

Selected students at the Teachers' College are receiving instruction in library techniques.

(v) *Industrial Libraries.* Before the war industrial libraries were practically unknown in Australia, but during recent years many manufacturing firms have found it necessary to establish libraries to keep their scientific staffs informed of the latest technical advances. At present there are seventeen libraries staffed by trained librarians attached to commercial organizations in Sydney, and 38 libraries in government and semi-government departments and scientific institutions. There are some 30 industrial libraries in Victoria, and several in other States.

(vi) *Microfilms.* Several libraries in Australia have adopted the practice of providing microfilm or photostat copies of material required for borrowing. In addition to the great convenience of this method of borrowing, it has the advantage of lessening the possibility of the loss or deterioration of valuable library material. A small charge is usually made for the service. The following is a list of libraries which undertake this service. The letter " P " signifies photostat supplied and " M " microfilm supplied :—Australian Capital Territory—Australian War Memorial (P), Commonwealth National Library (PM) ; New South Wales—Metropolitan Water Sewerage and Drainage Board (P), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM) ; Victoria—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch), (P), University of Melbourne (PM) ; South Australia—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P) ; and Tasmania—University of Tasmania (PM).

3. **Public Museums.**—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building to 30th June, 1946, was £84,000. The number of visitors to the institution in 1946 was 189,000, and the average attendance on week-days 444, and on Sundays 1,129. The expenditure for 1946 amounted to £17,500. A valuable library containing 32,025 volumes is attached to the Museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, while afternoon lectures for school children are provided. Nature talks are also broadcast by radio. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids to country schools. The " Nicholson " Museum of Antiquities, the " Macleay " Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum, at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and the gums, kinos, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains about 10,000 exhibits. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum founded in 1855 comprises exhibited and reference collections of zoology, geology and ethnology. It is entirely maintained by the State Government. The collections are principally but not exclusively, Australian ; there is, for example, the excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is *Memoirs of the Queensland Museum* which was preceded by the *Annals of the Queensland Museum.* The library is extensive and valuable, and of great assistance to research workers in the State.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum has considerable collections of most branches of natural history and was attended by 102,000 visitors in 1945–46. Cost of construction of the Museum building was returned as £65,000. In 1945–46 expenditure was £8,261.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 177,000 specimens, of an estimated value of £100,000. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 54,000. At the 30th June, 1946, the structure was valued at £65,500.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1945 to the extent of £5,477. The cost of construction in each case is included in that of Art Galleries given below.

4. **Public Art Galleries.**—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £96,000. At the end of 1946 its contents, which are valued at £239,000, comprised 954 oil paintings, 606 water colours, 1,655 black and white, 226 statuary and bronzes, and 1,050 ceramics, works in metal and miscellaneous. During the year the average attendance on week-days was 395, and on Sundays 1,232. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at the end of 1944 contained 1,007 oil paintings, 7,578 objects of statuary, bronzes, ceramics, etc., and 21,043 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £439,000. Cost of purchases to end of 1944 amounted to £548,200. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. There are provincial Art Galleries at Ballarat, Bendigo, Geelong, Castlemaine and Warrnambool and periodically pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1945 there were on view 225 oil paintings, 105 water colours, 234 black and white, and 42 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £22,500. Visitors during the year averaged 1,034 on Sundays and 249 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir Thomas Elder, the Government erected the present building which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and valuable prints and £3,000 in 1907 from Mr. David Murray. In 1935 Mr. Alex Melrose gave £10,000 for the extension of the building. At the 30th June, 1946, there were in the Gallery 1,325 paintings in oil and water colour, 402 drawings and black and white, and 67 items of statuary, the contents being valued at £77,470. Building and site are valued at upwards of £48,000. Visitors during the year 1945–46 numbered 86,000. The cost of construction of the Art Gallery amounted to £48,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as in the case of Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 186 oil paintings, 107 water colours, 353 black and white, 276 statuary, and 1,200 ceramic and other art objects, the whole being valued at £30,750. Cost of construction of the buildings amounted to £10,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 72 oil paintings, 36 water colours, 4 black and white, 3 statuary, and 10 etchings, engravings, etc. The cost of construction of the building was £5,000.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 102 oil paintings, 50 water colours, and 48 statuary, engravings and miscellaneous exhibits.

§ 14. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the years 1944–45 and 1945–46 is shown in the following tables. Owing to the details not being available in all States, the figures exclude officers' pensions, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical inspection of school children is also excluded, as this service is more appropriately classified under Public Health, etc. :—

STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART.

State.	Expenditure from—				Receipts.	Net Expenditure.
	Revenue.	Loan.	Other Funds.	Total.		
			1944–45.			
	£	£	£	£	£	£
New South Wales	6,646,301	92,428	..	6,738,729	220,339	6,518,390
Victoria	3,999,931	164,781	9,625	4,174,337	(a) 81,072	4,093,265
Queensland ..	2,264,828	92,308	..	2,357,136	24,910	2,332,226
South Australia ..	1,386,577	68,524	..	1,455,101	46,624	1,408,477
Western Australia	1,018,446	53,991	..	1,072,437	33,790	1,038,647
Tasmania ..	575,907	41,599	..	617,506	2,124	615,382
Total ..	15,891,990	513,631	9,625	16,415,246	408,859	16,006,387
			1945–46.			
	£	£	£	£	£	£
New South Wales	7,177,699	205,935	..	7,383,634	241,017	7,142,617
Victoria	4,373,833	312,784	25,610	4,712,227	(a) 78,131	4,634,096
Queensland ..	2,542,202	144,510	..	2,686,712	24,871	2,661,841
South Australia ..	1,524,712	94,656	..	1,619,368	37,569	1,581,799
Western Australia	1,137,675	76,973	..	1,214,648	45,664	1,168,984
Tasmania ..	721,926	69,058	..	790,984	1,325	789,659
Total ..	17,478,047	903,916	25,610	18,407,573	428,577	17,978,996

(a) In addition, fees in respect of technical education amounting to £109,251 in 1944–45 and £131,490 in 1945–46 were received and spent by the School Councils.

CHAPTER VII.

PUBLIC JUSTICE.

§ 1. Lower (Magistrates') Courts.

1. **General.**—In considering the criminal returns of the various States, due allowance must be made for certain factors, such as the relative powers of the higher and lower courts. In the case of lower courts, the actual number of laws in each State whose breach renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the returns. The strength and distribution of the police forces, and the age-constitution and distribution of the population of the States, also influence the results. Due weight should be given also to the prevalence of undetected crime, but information on this point is not available for all States. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia (largely a Court of Appeal intermediate to the Privy Council although it has also original jurisdiction), the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution which appears on page 18 of this issue.

2. **Powers of the Magistrates.**—Preceding issues of the Official Year Book contain a brief statement of the powers of the magistrates in the various States (see No. 22, p. 462), but this information is not repeated in the present volume.

3. **Cases Tried at Magistrates' Courts.**—The total number of arrest and summons cases tried at Magistrates' Courts in each State is given below for 1939 and for the years 1943 to 1946 :—

CASES TRIED AT MAGISTRATES' COURTS.

State or Territory.	1939.	1943.	1944.	1945.	1946.
New South Wales ..	144,848	135,503	126,501	141,079	173,311
Victoria	82,858	71,093	64,889	60,744	64,487
Queensland(*a*)	32,501	24,397	24,040	27,838	33,096
South Australia	22,776	(*a*)24,058	(*a*)22,646	(*a*)22,837	(*a*)27,067
Western Australia ..	24,111	22,085	21,682	19,716	24,831
Tasmania	9,498	6,508	6,318	6,422	9,390
Northern Territory(*a*) ..	1,494	540	244	349	786
Australian Capital Territory	284	419	409	354	633
Total	318,370	284,603	266,729	279,339	333,601

(*a*) Year ended 30th June following.

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or decrease of criminality should, therefore, be based upon a careful analysis of the detailed list of offences.

4. **Convictions at Magistrates' Courts.**—The figures given in the previous table include, of course, a number of people who were charged without sufficient reasons, and, statistically, are not of general importance. A classification of convictions of persons who appeared before the lower courts in each State during 1944 to 1946 is given in the following table :—

CONVICTIONS AT MAGISTRATES' COURTS.

Class of Offence.	N.S.W.	Vic.	Qld.(*a*)	S.A.(*a*)	W.A.	Tas.	N.T.(*a*)	A.C.T.	Aust.
1944.									
Against the Person ..	2,315	811	357	246	284	142	29	13	4,197
Against Property ..	12,652	5,371	3,149	1,213	2,553	513	11	64	25,526
Forgery and Offences against the Currency..	71	4	3	6	4	..	..	..	88
Against Good Order ..	49,758	19,066	9,138	5,688	5,492	924	154	155	90,375
Other Miscellaneous ..	46,212	31,687	8,279	13,401	11,969	3,650	..	54	115,282
Total	111,008	56,939	20,926	20,554	20,302	5,229	194	286	235,438
1945.									
Against the Person ..	2,387	823	381	280	258	107	21	5	4,262
Against Property ..	13,329	4,383	2,708	1,154	2.143	599	2	110	24,428
Forgery and Offences against the Currency..	52	5	1	1	..	1	..	..	60
Against Good Order ..	63,211	16,015	14,317	5,394	5,327	787	217	147	105,415
Other Miscellaneous ..	47,003	31,875	8,010	13,756	10,535	3,554	4	46	114,783
Total	125,982	53,101	25,417	20,585	18,263	5,048	244	308	248,948
1946.									
Against the Person ..	2,815	952	356	254	302	207	39	13	4,938
Against Property ..	11.939	4,233	2,116	1,315	2,462	775	45	56	22,941
Forgery and Offences against the Currency..	116	11	1	2	3	..	3	..	136
Against Good Order ..	87,490	17,341	19,045	6,343	5,551	1,340	172	299	137,581
Other Miscellaneous ..	54.748	34.091	9.105	16,577	14,724	5,207	479	72	135,003
Total	157,108	56,628	30,623	24,491	23,042	7,529	738	440	300,599

(*a*) Year ended 30th June following.

The following table shows the number of convictions in 1939 and in each year from 1943 to 1946 :—

CONVICTIONS AT MAGISTRATES' COURTS.

State or Territory.	1939.	1943.	1944.	1945.	1946.
New South Wales ..	126,353	118,366	111,008	125,982	157,108
Victoria	72,180	62,361	56,939	53,101	56,628
Queensland(*a*)	28,920	21,504	20,926	25,417	30,623
South Australia	20,429	(*a*) 22,079	(*a*) 20,554	(*a*) 20,585	(*a*) 24,491
Western Australia ..	22,539	20,842	20,302	18,263	23,042
Tasmania ..	8,722	5,122	5,229	5,048	7,529
Northern Territory(*a*) ..	1,394	422	194	244	738
Australian Capital Territory	260	408	286	308	440
Total	280,803	251,194	235,438	248,948	300,599

(*a*) Year ended 30th June following.

5. Convictions for Serious Crime at Magistrates' Courts.—(i) *General.* While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency. Owing to the smallness of the population, the rates for the Northern and the Australian Capital Territories are subject to considerable variation.

(ii) *Number and Rates, Years* 1939, 1943 *to* 1946. The following table shows the number and rates of convictions for serious crime at magistrates' courts for the years 1939, 1943 to 1946 :—

CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.

State or Territory.	1939.	1943.	1944.	1945.	1946.
			NUMBER.		
New South Wales ..	12,724	15,536	15,038	15,768	14,870
Victoria	5,727	6,471	6,186	5,211	5,196
Queensland(*a*)	2,402	3,353	3,509	3,090	2,473
South Australia	1,224	(*a*) 1,669	(*a*) 1,465	(*a*) 1,435	(*a*) 1,571
Western Australia ..	2,614	3,128	2,841	2,401	2,767
Tasmania	959	795	655	707	982
Northern Territory(*a*) ..	44	95	40	23	87
Australian Capital Territory	59	251	77	115	69
Total	25,753	31,298	29,811	28,750	28,015
			PER 10,000 OF THE POPULATION.		
New South Wales ..	46.26	54.36	52.10	54.04	50.48
Victoria	30.48	32.79	31.08	25.96	25.65
Queensland(*a*)	23.52	31.79	32.84	28.51	22.54
South Australia	20.50	(*a*) 27.08	(*a*) 23.51	(*a*) 22.74	(*a*) 24.53
Western Australia ..	55.63	65.60	58.99	49.23	56.13
Tasmania	40.15	32.73	26.67	28.44	38.94
Northern Territory(*a*) ..	60.58	91.35	38.21	21.84	81.53
Australian Capital Territory	47.18	184.04	54.23	76.61	43.44
Total	36.91	43.19	40.72	38.84	37.45

(*a*) Year ended 30th June following.

(iii) *Rate of Convictions,* 1881 *to* 1946. Statistics of convictions reveal a consistent increase in the rate of serious crime from 1925 to 1931, when 37.1 convictions per 10,000 of the population were recorded. Following this comparatively high figure the rate declined to 32.4 in 1933 but increased considerably to 36.9 in 1939. In 1941 the rate declined to 33.6 but rose in the next two years to 43.2, the highest recorded since 1891, when the average number of convictions was 44.8. The rate declined in 1944 to 40.7, in 1945 to 38.8 and in 1946 to 37.5. The rate of convictions over a series of years is included below; only the more serious offences particularized in the preceding sub-section have been taken into consideration.

RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS: AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1946.
Convictions per 10,000 persons	69.3	44.8	29.1	24.6	29.2	37.1	33.6	37.5

6. **Committals to Superior Courts.**—(i) *General.* In a previous paragraph it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, inasmuch as the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowances must be made for the want of uniformity in jurisdiction. A classification of the offences for which persons appearing in the lower courts were committed to higher courts in each State and Territory for the years 1944 to 1946 is shown in the following tables:—

COMMITTALS TO SUPERIOR COURTS.

Class of Offence.	N.S.W.	Vic.	Qld.(*a*)	S.A.(*a*)	W.A.	Tas.	N.T.(*a*)	A.C.T.	Aust.
1944.									
Against the Person ..	636	228	182	140	58	24	10	1	1,279
Against Property ..	1,915	1,248	162	120	59	30	5	..	3,539
Forgery and Offences against the Currency ..	22	66	1	..	7	..	..	..	96
Against Good Order ..	13	8	2	1	3	4	..	..	31
Other Miscellaneous ..	45	67	12	12	16	..	..	..	152
Total	2,631	1,617	359	273	143	58	15	1	5,097
1945.									
Against the Person ..	704	258	197	139	91	38	5	2	1,434
Against Property ..	2,274	1,219	164	177	90	52	..	4	3,980
Forgery and Offences against the Currency ..	12	67	..	6	6	18	..	..	109
Against Good Order ..	8	..	1	13	3	5	4	..	34
Other Miscellaneous ..	63	51	7	17	3	..	..	..	141
Total	3,061	1,595	369	352	193	113	9	6	5,698
1946.									
Against the Person ..	814	268	166	142	64	48	4	5	1,511
Against Property ..	2,576	1,176	225	161	88	60	2	24	4,312
Forgery and Offences against the Currency ..	118	30	..	20	5	2	..	..	175
Against Good Order ..	25	9	4	14	..	6	..	19	77
Other Miscellaneous ..	33	49	5	7	16	2	..	5	117
Total	3,566	1,532	400	344	173	118	6	53	6,192

(*a*) Year ended 30th June following.

The following table gives the number of committals in 1939 and in each year from 1943 to 1946, with the rate of such committals per 10,000 of the population :—

COMMITTALS TO SUPERIOR COURTS.

State or Territory.	1939.	1943.	1944.	1945.	1946.
			NUMBER.		
New South Wales	2,288	2,811	2,631	3,061	3,566
Victoria..	1,777	1,644	1,617	1,595	1,532
Queensland (*a*)	359	311	359	369	400
South Australia	259	(*a*) 274	(*a*) 273	(*a*) 352	(*a*) 344
Western Australia ..	129	170	143	193	173
Tasmania	82	42	58	113	118
Northern Territory (*a*) ..	12	33	15	9	6
Australian Capital Territory	18	..	1	6	53
Total	4,924	5,285	5,097	5,608	6,192
			PER 10,000 OF THE POPULATION.		
New South Wales ..	8.3	9.8	9.1	10.5	12.1
Victoria..	9.5	8.3	8.1	8.0	7.6
Queensland (*a*)	3.5	3.0	3.4	3.4	3.7
South Australia	4.3	(*a*) 4.5	(*a*) 4.4	(*a*) 5.6	(*a*) 5.4
Western Australia ..	2.8	3.6	3.0	4.0	3.5
Tasmania	3.4	1.7	2.4	4.6	4.7
Northern Territory (*a*) ..	16.5	31.7	14.3	8.6	5.6
Australian Capital Territory	14.4	..	0.7	4.0	33.4
Total	7.1	7.3	7.0	7.7	8.3

(*a*) Year ended 30th June following.

(ii) *Rate of Committals since* 1881. With occasional variations the rate of committals for serious crime has remained fairly stable during recent years, and, if the comparison be carried back further, the movement in the rate has undergone very little change during the present century. The rate at intervals since 1881 is as follows :—

RATE OF COMMITTALS TO SUPERIOR COURTS : AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1946.
Committals per 10,000 persons	12	11	8	6	7	8	6	8

7. **Drunkenness.**—(i) *Cases and Convictions.* The number of arrest and summons cases of drunkenness and the convictions recorded during the year 1939 and for the years 1943 to 1946 are given in the following table :—

DRUNKENNESS : CASES AND CONVICTIONS.

State or Territory.	1939.		1943.		1944.		1945.		1946.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	32,472	32,405	34,929	34,906	34,576	34,562	43,582	43,561	62,211	62,120
Victoria ..	11,609	11,421	12,561	12,444	12,518	12,388	10,534	10,443	11,704	11,601
Queensland (*a*) ..	11,202	11,118	8,367	8,288	7,489	7,399	11,675	11,617	16,154	16,042
South Australia ..	2,607	2,597	*a* 4,636	*a* 4,618	*a* 4,007	*a* 3,985	*a* 3,515	*a* 3,507	*a* 4,311	*a* 4,296
Western Australia	2,681	2,658	3,855	3,821	4,164	4,120	4,087	4,039	4,094	4,052
Tasmania ..	411	407	396	367	307	291	232	223	464	450
Northern Terr. (*a*)	686	677	100	100	38	38	185	139	119	113
Aust. Cap. Terr.	114	114	37	37	62	62	37	37	139	136
Total ..	61,782	61,397	64,881	64,581	63,161	62,845	73,847	73,566	99,196	98,810

(*a*) Year ended 30th June following.

Under the heading "drunkenness" are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness.

The number of convictions is, as might naturally be expected, almost identical with the number of cases.

(ii) *Convictions per* 10,000 *of Population.* The convictions for drunkenness per 10,000 of the population during 1939 and each of the years from 1943 to 1946 are given in the following table :—

CONVICTIONS FOR DRUNKENNESS PER 10,000 OF THE POPULATION.

State or Territory.	1939.	1943.	1944.	1945.	1946.
New South Wales ..	117.8	122.1	119.8	149.3	210.9
Victoria	60.8	63.1	62.3	52.0	57.3
Queensland (*a*)	108.9	78.6	69.3	107.2	146.2
South Australia	43.5	(*a*) 74.9	(*a*) 63.9	(*a*) 55.6	(*a*) 67.1
Western Australia ..	56.6	80.1	85.5	82.8	82.2
Tasmania	17.0	15.1	11.9	9.0	17.8
Australian Capital Territory	91.2	27.1	43.7	24.7	85.6
Total	88.0	89.1	85.9	99.4	132.1

(*a*) Year ended 30th June following.

In the twenties the convictions for drunkenness averaged approximately 100 per 10,000 inhabitants, but the rate fell away considerably during the following years and was only 57.1 in 1931. With the improvement in the social condition of the people following that year, the average rose steadily to 84.1 in 1936, declined somewhat during the next two years, and rose to 91.7 in 1942, but decreased to 89.1 in 1943 and to 85.9 in 1944 but rose to 99.4 in 1945 and then sharply to 132.1 in 1946. Figures for the consumption of beer have followed a fairly similar course. From an average of 11.33 gallons per head of the population consumed for some years prior to 1931–32, when the amount declined to 7.32 gallons, the average rose each year to 13.76 gallons in 1941–42, but declined in 1942–43 to 12.59 gallons, rose to 13.00 gallons in 1943–44, declined to 12.90 gallons in 1944–45, rose to 13.45 in 1945–46, and then sharply to 15.94 in 1946–47.

The convictions for drunkenness taken by themselves are not altogether a satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. Another factor is the distribution of the population. Arrest or summons for drunkenness obviously is more likely in the regions densely populated than in those sparsely populated. In addition allowance must be made for the attitude of the magistracy, the police and the general public in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine and beer per head of the population in Australia during the years 1938–39 and 1940–41 to 1946–47 :—

CONSUMPTION OF INTOXICANTS IN AUSTRALIA.

Year.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	Imp. Galls.	Imp. Galls.	Imp. Galls.
1938–39	0.22	0.65	12.13
1940–41	0.21	0.91	13.71
1941–42	0.20	0.98	13.76
1942–43	0.22	1.28	12.59
1943–44	0.23	1.17	13.00
1944–45	0.23	1.18	12.90
1945–46	0.32	0.96	13.45
1946–47	0.29	1.07	15.94

(iv) *Treatment of Drunkenness.* (*a*) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. During recent years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with those convicted of more serious offences.

(*b*) *Remedial.* Legislation has been passed in each State providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912 ; Victoria, Inebriates Act 1928 ; Queensland, Inebriate Institutions Act 1896 ; South Australia, Inebriates Act 1908–1934, Convicted Inebriates Act 1913–1934 ; Western Australia, Inebriates Act 1912–1919 ; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management ; nevertheless, the results of remedial measures have been encouraging.

8. **First Offenders.**—In all the States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows :—New South Wales, Crimes Act 1900 amended in 1924 and 1929, First Offenders (Women) Act 1919 ; Victoria, Crimes Act 1928 ; Queensland, Criminal Code Acts 1899 to 1945 ; South Australia, Offenders Probation Act 1913–1941 ; Western Australia, Criminal Code Act 1913–1942 ; Tasmania, Probation of Offenders Act 1934. The method of procedure is practically the same in all cases, i.e., with regard to most first offenders convicted of a minor offence the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those convicted under it having been found to relapse into crime.

9. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia and Tasmania, while Children's Courts, although not under that title, are provided for by the Maintenance Act 1926–1941 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

§ 2. Superior Courts (Judges' Courts).

1. **Convictions at Superior Courts.**—The following is a list of the principal offences for which persons were convicted in superior courts in each State and Territory during 1946 and in Australia as a whole in that year and for the years 1944 and 1945 :—

CONVICTIONS AT SUPERIOR COURTS, 1946.

Offence.	N.S.W. (*a*)	Vic.	Qld. (*a*)	S.A.	W.A.	Tas.	N.T. (*a*)	A.C.T.	Australia.		
									1946.	1945.	1944.
I. OFFENCES AGAINST THE PERSON.											
Murder	5	2	4	1	3	1	..	..	16	17	19
Attempted Murder ..	..	..	..	..	..	1	2	..	3	3	6
Manslaughter ..	9	2	8	4	2	..	3	..	28	32	22
Rape	10	2	6	3	..	4	..	..	25	18	16
Other Offences against Females ..	79	56	20	47	6	13	5	..	226	224	142
Unnatural Offences ..	58	22	6	11	8	3	4	1	113	103	108
Abortion and Attempts to Procure	5	1	2	3	..	4	..	..	15	11	9
Bigamy	51	21	18	1	6	2	..	2	101	145	149
Suicide, Attempted ..	..	3	..	1	..	4	..	..	8	8	6
Assault, Aggravated	..	..	22	4	5	2	9	..	42	31	27
Assault, Common ..	65	6	7	6	..	..	4	..	88	51	46
Other Offences against the Person ..	69	36	9	5	..	..	2	..	121	93	123
Total ..	351	151	102	86	30	34	29	3	786	736	673
II. OFFENCES AGAINST PROPERTY.											
Burglary and House-breaking ..	628	271	75	17	24	13	5	..	1,033	962	887
Robbery and Stealing from the Person ..	61	15	8	4	1	17	4	..	110	85	78
Horse-stealing ..	..	2	1	..	..	..	..	..	3	5	3
Cattle-stealing ..	3	1	3	..	..	..	..	..	7	6	8
Sheep-stealing ..	..	1	..	..	..	..	..	..	1	..	..
Embezzlement and Stealing by Servants	13	6	4	4	4	..	..	..	31	18	27
Larceny, Other ..	163	123	39	86	14	..	2	4	431	336	354
Unlawfully using Horses, Cattle and Vehicles ..	15	1	1	..	1	..	..	..	18	15	10
Receiving	71	40	12	5	3	1	4	..	136	130	156
Fraud and False Pretences	34	21	4	8	4	3	..	..	74	42	49
Arson	1	5	3	1	1	1	..	..	12	19	10
Malicious Damage ..	10	1	1	..	..	..	..	..	12	6	4
Other Offences against Property ..	9	9	1	..	1	1	..	..	21	25	25
Total ..	1,008	496	152	125	53	36	15	4	1,889	1,649	1,611
III. FORGERY AND OFFENCES AGAINST THE CURRENCY.											
Forgery and Uttering Forged Instruments	16	24	..	3	5	..	3	..	51	31	31
Offences in relation to the Currency ..	..	..	..	..	..	..	..	..	..	..	1
Total ..	16	24	..	3	5	..	3	..	51	31	32
IV. OFFENCES AGAINST GOOD ORDER. ..	6	2	6	..	..	..	3	..	17	17	15
V. OTHER MISCELLANEOUS.											
Conspiracy ..	9	2	..	6	1	..	..	..	18	9	15
Perjury and Subornation	1	6	..	..	..	1	..	..	8	14	21
Other Offences ..	5	31	1	11	5	2	..	..	55	42	20
Total ..	15	39	1	17	6	3	..	..	81	65	56
Grand Total ..	1,396	712	261	231	94	73	50	7	2,824	2,498	2,387

(*a*) Year ended 30th June, 1947.

2. **Convictions at Superior Courts, Years 1939, 1943 to 1946.**—The number of convictions at superior courts and the rate per 10,000 of the population are given below for each of the years 1939 and 1943 to 1946 :—

CONVICTIONS AT SUPERIOR COURTS.

State or Territory.	1939.	1943.	1944.	1945.	1946.
			NUMBER.		
New South Wales (*a*)	982	1,130	1,050	1,178	1,396
Victoria	690	826	792	692	712
Queensland (*a*)	214	200	218	229	261
South Australia	179	200	158	203	231
Western Australia	71	93	87	99	94
Tasmania	39	35	56	73	73
Northern Territory (*a*)	11	29	25	20	50
Australian Capital Territory	14	..	1	4	7
Total	2,200	2,513	2,387	2,498	2,824
			PER 10,000 OF THE POPULATION.		
New South Wales (*a*)	3.6	3.9	3.6	4.0	4.7
Victoria	3.7	4.2	4.0	3.5	3.5
Queensland (*a*)	2.1	1.9	2.0	2.1	2.4
South Australia	3.0	3.3	2.6	3.2	3.6
Western Australia	1.5	2.0	1.8	2.0	1.9
Tasmania	1.6	1.4	2.3	2.9	2.9
Northern Territory (*a*)	15.2	27.0	23.9	19.0	46.9
Australian Capital Territory	11.2	..	0.7	2.7	4.4
Total	3.2	3.5	3.3	3.4	3.8

(*a*) Year ended 30th June following.

The rate of convictions per 10,000 of population for Australia, which in 1930 stood at 4.0, fell each year thereafter until 1936 when the record low level of 2.3 was reached. It rose during each of the next three years to 3.2 in 1939 and after falling to 2.8 in 1940 rose in each of the next three years reaching 3.5 in 1943. Following a fall to 3.3 in 1944 the rate rose during 1945 and 1946 and stood at 3.8 in the latter year. Owing to the smallness of the population and the particular conditions prevailing there, the rates for the Territories naturally show considerable variation.

3. **Habitual Offenders.**—Some account of the methods adopted in each State in connexion with habitual offenders is given in preceding issues of the Official Year Book (see No. 22, pp. 469–70).

4. **Capital Punishment.**—There were nine executions in Australia during the period 1937 to 1946. Two took place in New South Wales (one in 1938 and one in 1939), three in Victoria (two in 1939 and one in 1942), three in South Australia (one in 1938, one in 1944 and one in 1946) and one in Tasmania in 1946.

Under the Criminal Code Amendment Act 1922 capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' court. With the growth of settlement and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be stated that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be carried out.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; and from 1931 to 1940, 1.

§ 3. Civil Courts.

1. **Lower Courts.**—The total number of plaints entered and the amounts awarded to plaintiffs during the years 1944 to 1946 are given in the following table. Particulars for earlier years appear in preceding issues of the Official Year Book.

The figures represent the returns from the Small Debts Courts in New South Wales, Petty Session Courts in Victoria, Magistrates' Courts in Queensland, Local Courts of South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in Northern Territory and Court of Petty Sessions in the Australian Capital Territory.

CIVIL CASES AT LOWER COURTS.

State.	1944.	1945.	1946.	State or Territory.	1944.	1945.	1946.
N.S.W.—				Tas.—			
Cases No.	19,635	18,064	20,245	Cases No.	7,342	6,816	8,225
Amount £	103,862	99,049	110,321	Amount £	25,125	24,256	31,425
Victoria—				N. Ter.(*a*)—			
Cases No.	30,064	31,191	31,686	Cases No.	18	52	76
Amount £	186,305	210,210	244,146	Amount £	103	..	..
Qld.(*a*)—				A.C.T.—			
Cases No.	3,429	2,211	3,453	Cases No.	125	108	173
Amount £	41,537	39,963	66,982	Amount £	1,127	1,167	888
S. Aust.—							
Cases No.	9,331	12,590	13,861				
Amount £	51,019	53,317	60,367				
W. Aust.—				Total—			
Cases No.	11,183	10,641	13,876	Cases No.	81,127	81,673	91,595
Amount £	37,873	46,611	67,129	Amount £	446,951	474,573	581,258

(*a*) Year ended 30th June following.

2. **Superior Courts.**—The following table shows the transactions on the civil side in the Superior Courts during the years 1944 to 1946. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to cases actually tried during the year.

The New South Wales returns refer to judgments in the District Courts only, and exclude 677 judgments in 1944, 607 judgments in 1945 and 803 judgments in 1946 signed in the Supreme Court, for which the amounts entered are not available.

CIVIL CASES AT SUPERIOR COURTS.

State.	1944.	1945.	1946.	State or Territory.	1944.	1945.	1946.
N.S.W.—				W. Aust.(*b*)—			
Causes No.	1,807	1,786	2,325	Causes No.	57	101	121
Amount £	122,439	117,007	149,988	Amount £	36,449	120,595	48,892
Victoria—				Tas.—			
Causes No.	1,047	1,179	1,553	Causes No.	138	118	217
Amount £	70,244	103,858	131,523	Amount £	23,887	16,363	29,685
Qld.(*a*)—				A.C.T.—			
Causes No.	1,109	1,277	1,296	Causes No.	3	1	1
Amount £	12,682	41,639	115,680	Amount £	5,643	205	247
S. Aust.—				Total—			
Causes No.	675	767	857	Causes No.	4,836	5,229	6,370
Amount £	7,154	11,649	17,969	Amount £	278,498	411,316	493,984

(*a*) Year ended 30th June following. (*b*) Judgments signed and entered.

3. **Divorces and Judicial Separations.**—(i) *Number of Petitions and Divorces granted.* The following table shows the number of petitions for divorce, nullity of marriage and judicial separations filed in each State during 1946, and the number of divorces made absolute and judicial separations granted :—

PETITIONS FOR DIVORCE, ETC., AND DIVORCES GRANTED, 1946.

State or Territory.	Petitions for Divorce, Nullity of Marriage and Judicial Separation. By Husband.	By Wife.	Total.	Divorces and Nullity made absolute.	Judicial Separations.
New South Wales	2,262	2,047	4,309	2,792	6
Victoria	1,195	1,044	2,239	1,648	3
Queensland	671	508	1,179	1,161	1
South Australia	393	466	859	656	1
Western Australia	577	438	1,015	731	..
Tasmania	144	140	284	219	..
Northern Territory	5	1	6	4	..
Australian Capital Territory ..	16	8	24	12	1
Total 1946	5,263	4,652	9,915	7,223	12
1945	4,969	4,147	9,116	7,199	16
1944	4,555	3,598	8,153	5,681	11

(ii) *Number of Divorces, etc., granted, Years* 1939, 1943 *to* 1946. The number of divorces and judicial separations in each State and Territory for the year 1939 and the years 1943 to 1946 is shown in the following table. The figures refer, in the case of divorces, to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

State or Territory.	1939.		1943.		1944.		1945.		1946.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
New South Wales	1,545	8	1,837	3	2,044	5	3,129	10	2,792	6
Victoria	801	4	1,382	1	1,692	2	1,759	..	1,648	3
Queensland	*a* 224	..	441	3	719	2	903	4	1,161	1
South Australia	243	..	450	..	497	2	604	2	656	1
Western Australia	244	..	476	..	601	..	619	..	731	..
Tasmania	80	..	89	..	115	..	172	..	219	..
Northern Territory(*a*) ..	2	..	3	..	4	..	6	..	(*b*) 4	(*b*) ..
Australian Capital Territory ..	6	1	4	..	9	..	7	..	12	1
Total	3,145	13	4,682	7	5,681	11	7,199	16	7,223	12

(*a*) Year ended 30th June following. (*b*) Year 1946.

(iii) *Average Annual Number of Divorces granted, Years* 1871 *to* 1940.—The average annual number of divorces and judicial separations in Australia for decennial periods from 1871 to 1940 were as follows :—

DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

Year ..	1871–80.	1881–90.	1891–1900.	1901–10.	1911–20.	1921–30.	1931–40.
Average ..	29	70	358	399	744	1,699	2,521

(iv) *Grounds of Decree on which Divorce, etc., granted, Years* 1944 *to* 1946. The grounds on which divorces, including nullity of marriage, were made absolute and judicial separations granted during 1944 to 1946 in each State and Territory are given in the following table :—

GROUNDS ON WHICH DIVORCES AND JUDICIAL SEPARATIONS WERE GRANTED.

Grounds on which Decrees were Granted.	N.S.W.		Vic.		Qld.		S.A.		W.A.		Tas.		N.T.(*a*)		A.C.T.		Aust.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
1944.																		
Adultery ..	542	3	635	1	405	1	285	..	359	..	33	..	1	..	3	..	2,263	5
Bigamy ..	10	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..
Cruelty ..	12	2	5	..	1	1	26	..	1	..	3	..	..	..	1	..	49	3
Cruelty and Drunkenness..	30	..	8	..	..	..	..	2	5	..	..	..	..	..	..	..	43	2
Drunkenness ..	24	..	3	..	..	..	5	..	2	..	1	..	..	..	..	..	35	..
Desertion ..	1,413	..	994	1	293	..	156	..	202	..	76	..	3	..	5	..	3,142	1
Imprisonment for Crime ..	6	..	6	..	..	..	1	..	1	..	1	..	..	..	..	..	15	..
Insanity ..	..	..	18	..	9	..	6	..	2	..	1	..	..	..	..	..	36	..
Other	7	..	19	..	11	..	18	..	29	..	..	..	..	..	..	..	84	..
Total ..	2,044	5	1,692	2	719	2	497	2	601	..	115	..	4	..	9	..	5,681	11
1945.																		
Adultery ..	935	6	677	..	455	3	371	1	361	..	60	..	3	..	4	..	2,866	10
Bigamy ..	24	..	10	..	1	..	1	..	2	..	1	..	..	..	..	..	39	..
Cruelty ..	29	3	4	..	..	..	29	1	..	..	3	..	..	..	..	..	65	4
Cruelty and Drunkenness..	37	..	9	..	..	..	..	..	5	..	..	..	..	..	..	..	51	..
Drunkenness ..	17	..	8	..	..	..	7	..	2	..	3	..	..	..	..	..	37	..
Desertion ..	2,061	1	1,005	..	427	1	179	..	221	..	105	..	3	..	3	..	4,004	2
Imprisonment for Crime ..	8	..	11	..	..	..	..	..	3	..	..	..	..	..	..	..	22	..
Insanity ..	..	..	11	..	4	..	3	..	4	..	..	..	..	..	..	..	22	..
Other	18	..	24	..	16	..	14	..	21	..	..	..	..	..	..	..	93	..
Total ..	3,129	10	1,759	..	903	4	604	2	619	..	172	..	6	..	7	..	7,199	16
1946.																		
Adultery ..	870	5	654	1	513	..	411	1	429	..	85	..	1	..	[illegible]	..	2,966	7
Bigamy ..	15	..	4	..	2	..	2	..	2	..	..	..	..	..	..	..	25	..
Cruelty ..	17	..	4	..	..	1	34	..	..	..	3	..	..	..	..	1	58	2
Cruelty and Drunkenness..	45	..	10	..	..	..	..	..	6	..	..	..	..	..	..	..	61	..
Drunkenness ..	13	..	8	..	..	..	5	..	1	..	..	..	..	..	..	..	27	..
Desertion ..	1,808	1	926	2	624	..	180	..	260	..	130	..	3	..	9	..	3,940	3
Imprisonment for Crime ..	16	..	4	..	..	..	..	..	3	..	..	..	..	..	..	..	23	..
Insanity ..	..	..	11	..	7	..	12	..	5	..	..	..	..	..	..	..	35	..
Other	8	..	27	..	15	..	12	..	25	..	1	..	..	..	..	..	88	..
Total ..	2,792	6	1,648	3	1161	1	656	1	731	..	219	..	4	..	12	1	7,223	12

(*a*) See notes to previous table.

(v) *Ages of Husband and Wife at Time of Divorce,* 1946. The following table shows the number of husbands and wives who were divorced in each age group at the time when the divorce decree was made absolute. In 1946 the incidence of divorce was highest in the vicinity of the group 30 to 34 years :—

AGES OF PARTIES AT TIME OF DIVORCE : AUSTRALIA, 1946.

Ages of Husbands (Years).	Ages of Wives (Years).											Total Husbands
	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.	Not stated.	
Under 21 ..	5	4	..	..	..	..	..	..	..	..	..	9
21 to 24 ..	43	177	50	3	..	..	..	..	..	..	..	273
25 to 29 ..	24	438	698	98	13	..	..	..	..	..	1	1,272
30 to 34 ..	10	145	717	712	99	11	2	1	..	..	2	1,699
35 to 39 ..	1	40	213	640	493	67	9	3	..	1	..	1,467
40 to 44 ..	1	4	48	186	399	331	47	2	2	..	1	1,021
45 to 49 ..	..	3	12	69	118	226	207	29	4	1	..	669
50 to 54 ..	..	1	5	11	32	75	135	96	11	3	..	369
55 to 59 ..	..	1	1	8	8	27	55	56	41	12	..	209
60 and over ..	..	..	..	2	8	9	14	26	41	33	..	133
Not stated ..	..	1	1	..	1	..	..	..	..	..	31	34
Total Wives ..	84	814	1,745	1,729	1,171	746	469	213	99	50	35	7,155

NOTE.—Excludes nullity of marriage.

(vi) *Duration of Marriage and Issue.* The following table shows the legal duration of marriage (i.e., the period from the date of marriage to the date when the decree nisi was made absolute) and the number of children born in respect of the decrees made absolute in 1946. Of the couples divorced in 1946, 39.6 per cent. had no children, 28.6 per cent. had one child, 18.0 per cent. had two children, 7.2 per cent. had three children and 6.6 per cent. had four or more children :—

DURATION OF MARRIAGE AND ISSUE : AUSTRALIA, 1946.

Duration of Marriage (Years).	Number of Children.													Total Divorces made absolute.	Total children.
	0	1	2	3	4	5	6	7	8	9	10	12	N.S.		
Under 1 year ..	4	1	..	..	..	..	..	..	..	..	..	..	..	5	1
1 and under 2 ..	58	9	1	..	..	..	..	..	..	..	..	..	..	68	11
2 ,, ,, 3 ..	145	31	1	..	..	..	..	..	..	..	..	..	..	177	33
3 ,, ,, 4 ..	224	61	10	..	..	..	..	..	..	..	..	..	1	296	81
4 ,, ,, 5 ..	380	112	24	2	..	..	..	..	..	..	..	..	1	519	166
5 ,, ,, 6 ..	365	179	44	6	..	1	..	..	..	..	..	..	1	596	290
6 ,, ,, 7 ..	260	184	52	5	..	1	..	..	..	..	..	..	1	503	308
7 ,, ,, 8 ..	214	154	76	21	3	..	..	..	..	..	..	..	..	468	381
8 ,, ,, 9 ..	173	151	91	23	6	..	..	..	..	..	..	..	1	445	426
9 ,, ,, 10 ..	135	138	74	19	3	2	..	..	..	..	..	..	..	371	365
10 ,, ,, 11 ..	110	114	93	30	12	..	..	..	1	..	..	..	..	360	446
11 ,, ,, 12 ..	101	121	89	33	11	1	..	1	..	..	..	..	..	357	454
12 ,, ,, 13 ..	90	107	79	30	13	..	..	..	..	1	..	..	..	326	446
13 ,, ,, 14 ..	85	86	70	26	10	3	1	..	..	..	..	..	..	281	365
14 ,, ,, 15 ..	55	79	67	26	12	4	2	..	..	..	..	..	..	245	371
15 ,, ,, 16 ..	42	68	54	25	11	7	..	..	1	2	..	..	..	210	356
16 ,, ,, 17 ..	47	75	64	33	17	8	1	1	1	..	..	1	..	248	443
17 ,, ,, 18 ..	48	48	66	26	13	6	4	..	..	1	..	..	1	213	373
18 ,, ,, 19 ..	30	52	46	13	14	9	2	..	1	..	..	..	..	167	304
19 ,, ,, 20 ..	30	49	42	26	13	3	..	..	1	1	..	..	..	165	295
20 ,, ,, 21 ..	40	51	36	20	8	5	5	2	..	..	1	..	..	168	294
21 to 24 years ..	97	88	108	69	41	25	13	4	3	2	..	..	..	450	948
25 to 29 ,, ..	61	57	64	50	34	17	11	7	4	2	1	..	..	308	731
30 to 34 ,, ..	26	21	23	25	17	16	10	2	2	2	..	..	..	144	398
35 to 39 ,, ..	11	4	7	9	11	1	..	1	3	1	..	..	..	48	134
40 to 44 ,, ..	1	1	5	1	2	4	1	..	1	..	..	..	..	16	56
Not stated ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
Total Divorces ..	2,832	2,042	1,286	518	251	119	50	18	18	12	2	1	6	7,155	..
Total Children ..	..	2,042	2,572	1,554	1,004	595	300	126	144	108	20	12	..	..	8,477

NOTE.—Excludes nullity of marriage.

(vii) *Number of Divorced Persons at Censuses 1891 to 1933.*—The following table shows the numbers and proportions of divorced males and females according to age in Australia at each Census from 1891 to 1933. Prior to 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

DIVORCED PERSONS: AGE DISTRIBUTION, AUSTRALIA.

Age last Birthday.	Number.					Proportion per 10,000 of the Sex.				
	1891. (a)	1901. (a)	1911.	1921.	1933.	1891. (a)	1901. (a)	1911.	1921.	1933.
MALES.										
Years—										
15–19 ..	..	..	2	11	..	..	..	..	..	..
20–24 ..	10	21	27	55	73	..	1	1	2	3
25–29 ..	37	77	137	321	501	2	5	7	14	18
30–34 ..	60	167	286	580	1,100	4	11	17	26	44
35–39 ..	68	262	321	661	1,575	7	17	21	34	69
40–44 ..	41	233	361	592	1,777	5	19	25	35	77
45–49 ..	34	154	407	533	1,614	5	17	30	37	77
50–54 ..	27	131	338	498	1,256	4	19	31	37	73
55–59 ..	28	76	204	425	877	6	14	28	36	66
60–64 ..	16	55	134	281	611	4	12	26	31	53
65–69 ..	5	33	76	155	477	2	9	19	28	51
70–74 ..	5	14	43	86	270	3	5	14	26	41
75–79 ..	1	7	12	27	122	1	5	6	14	34
80–84 ..	..	3	14	7	35	..	5	16	7	25
85 and over ..	..	1	6	1	10	..	5	17	2	17
Age 15 and over	332	1,234	2,368	4,233	10,298	3	10	15	23	42
FEMALES.										
Years—										
15–19 ..	2	2	1	8	6	..	..	..	..	..
20–24 ..	16	56	71	168	230	1	3	3	7	8
25–29 ..	60	168	239	526	960	4	11	13	22	37
30–34 ..	49	244	332	756	1,565	5	18	21	34	66
35–39 ..	40	287	374	713	1,939	5	24	26	37	82
40–44 ..	26	178	366	621	1,880	4	19	29	38	83
45–49 ..	19	107	319	496	1,598	4	16	29	37	80
50–54 ..	10	52	229	405	1,066	2	10	27	34	65
55–59 ..	4	28	79	280	662	1	6	14	28	51
60–64 ..	1	11	59	217	485	..	3	13	28	42
65–69 ..	..	10	38	70	287	..	3	10	14	32
70–74 ..	1	5	14	25	136	1	3	5	8	21
75–79 ..	..	..	16	14	58	..	..	10	7	16
80–84 ..	..	1	2	2	12	..	2	3	2	8
85 and over ..	..	..	1	3	4	..	..	3	5	5
Age 15 and over	228	1,149	2,140	4,304	10,888	3	10	15	24	46

(*a*) Excludes South Australia.

4. **Bankruptcies.**—Particulars relating to bankruptcy in each State up to the end of 1927 were incorporated under this heading in issues of the Official Year Book prior to No. 23. Under the terms of the Bankruptcy Act 1924–1946 jurisdiction in bankruptcy and insolvency was taken over by the Commonwealth from 1st August, 1928. The Act made provision for the declaration of districts, and each State (except Queensland and Northern Territory) has been declared a bankruptcy district The bankruptcy district of New South Wales includes the Australian Capital Territory. Queensland has been divided into three districts corresponding to the three Supreme Court districts in that State. Operations under the Act for the years ended 31st July, 1946 and 1947 are given in the following table. For the purposes of comparison, the annual averages for periods between the years 1920 and 1947 are appended to the table.

FEDERAL BANKRUPTCY ACT, 1946-47.

Particulars.		N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number ..	92	45	23	19	22	5	..	206
	Liabilities £	159,515	22,292	11,561	29,850	30,903	3,071	..	257,192
	Assets £	30,192	2,700	12,232	14,602	17,638	1,614	..	78,978
Division 5—Compositions, etc., after Bankruptcy	Number ..	..	4	6	4	7	..	..	21
	Amount under 10s.	..	3	5	4	5	..	..	17
	Amount over 10s.	..	1	1	..	2	..	..	4
Compositions without Bankruptcy Part XI.	Number ..	2	..	..	6	7	..	..	15
	Liabilities £	8,248	..	..	12,100	8,693	..	..	29,041
	Assets £	262	..	..	12,287	3,574	..	..	16,123
Deeds under Part XI.	Number ..	..	..	..	2	3	..	..	5
	Liabilities £	..	..	..	3,794	5,148	..	..	8,942
	Assets £	..	..	..	3,274	3,956	..	..	7,230
Deeds of Arrangement, Part XII.	Number ..	14	10	5	..	..	..	..	29
	Liabilities £	40,064	17,198	12,869	..	..	..	..	70,131
	Assets £	44,795	15,837	12,670	..	..	..	..	73,302
Total, 1946-47	Number ..	108	55	28	27	32	5	..	255
	Liabilities £	207,827	39,490	24,430	45,744	44,744	3,071	..	365,306
	Assets £	75,249	18,537	24,902	30,163	25,168	1,614	..	175,633
Total, 1945-46	Number ..	67	34	21	23	15	7	..	167
	Liabilities £	66,109	117,169	11,385	34,839	30,890	854	..	261,246
	Assets £	101,303	30,950	2,695	34,437	11,974	137	..	181,496
Average 4 years ended 1946-47	Number ..	84	48	20	35	14	7	..	208
	Liabilities £	141,657	74,798	18,440	97,191	22,325	2,676	..	357,087
	Assets £	74,205	27,295	14,805	65,374	11,904	875	..	194,458
Average 5 years ended 1942-43	Number ..	434	296	134	357	81	45	..	1,347
	Liabilties £	664,121	297,840	219,588	1,000,376	236,178	28,293	406	2,446,802
	Assets £	429,462	127,977	152,602	730,482	166,561	14,475	182	1,621,741
Average 5 years ended 1937-38	Number ..	496	383	183	544	108	58	..	1,772
	Liabilities £	707,075	627,900	259,921	1,566,821	228,023	56,944	932	3,448,276
	Assets £	477,547	277,004	194,174	1,076,347	187,933	33,688	795	2,247,488
Average 5 years ended 1932-33	Number ..	959	689	305	637	344	95	..	3,029
	Liabilities £	1,920,030	1,419,402	605,789	1,043,637	871,520	116,014	260	5,976,652
	Assets £	1,552,489	1,006,120	493,108	796,478	1,215,686	82,227	80	5,146,188

It is pointed out that the procedure in certain States has been influenced largely by the procedure in force prior to the passing of the Commonwealth Act, and that, therefore, no particular significance attaches to the large number of compositions, etc., in South Australia.

The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and provided for the appointment of a Judge or two Judges thereto. In 1930 a Commonwealth Judge in Bankruptcy was appointed in addition to the State Judges to deal with bankruptcy work in New South Wales and Victoria, as the Courts in these States were unable to cope with the business. All the bankruptcy cases in these States are now heard in the Federal Court which sits in Sydney and Melbourne alternatively.

5. **High Court of Australia.** Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Commonwealth High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903–1940. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals

of the various States as occasion may require. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1945 and 1946.

TRANSACTIONS OF COMMONWEALTH HIGH COURT.

Original Jurisdiction.	1945.	1946.	Appellate Jurisdiction.	1945.	1946.
Number of writs issued	81	84	Number of appeals set down for hearing ..	92	91
Number of causes entered for trial ..	23	12			
Verdicts for plaintiffs	20	9	Number allowed ..	27	24
Verdicts for defendants	7	1	Number dismissed ..	50	46
Otherwise disposed of ..	4	12			
Amount of judgments	£97,094	£28,414	Otherwise disposed of	11	11

During 1945 and 1946 respectively the High Court dealt also with the following: Appeals from Assessments under Taxation Assessment Act, 18, 23; Special cases stated for the opinion of the Full Court, 22, 12; Applications for Prohibitions, etc., 38, 20. The fees collected amounted to £1,163 in 1945 and £1,040 in 1946.

6. **Commonwealth Court of Conciliation and Arbitration.**—A detailed statement regarding the operation of this Court, which was established under the Commonwealth Conciliation and Arbitration Act 1904–1947 will be found in Chapter XII. "Labour, Wages and Prices", and in the *Labour Report.*

§ 4. Police and Prisons.

1. **General.**—Early issues of the Official Year Book (see No. 4, p. 918) contain a *résumé* of the evolution of the police force in Australia up to the passing of the Police Act 1862 (25 Vic. No. 16) in New South Wales.

2. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, it has been estimated that one-fifth of the time of the force was taken up in extraneous duties not connected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1941–42 no less than 54 important subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that for the year ended June, 1946, many inquiries were made on behalf of other State and Commonwealth departments.

3. **Strength of Police Force.**—(i) *General.* The strength of the police force in each State during 1939 and the years 1943 to 1946 is given in the following table. It may be mentioned that the police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and in the Australian Capital Territory) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as acting as aliens registration officers, and policing the liquid fuel regulations, etc.

STRENGTH OF POLICE FORCES.

State or Territory.	Area of State in Sq. Miles.	No. of Police.				
		1939.	1943.	1944.	1945.	1946.
New South Wales ..	309,433	3,907	3,711	3,630	3,710	4,084
Victoria	87,884	2,333	2,263	2,209	2,131	2,198
Queensland (*a*) ..	670,500	1,460	1,733	1,730	1,741	1,734
South Australia (*a*) ..	380,070	905	866	884	922	920
Western Australia (*a*)	975,920	600	582	571	626	661
Tasmania (*a*) ..	26,215	296	312	286	317	314
Northern Territory(*a*)	523,620	48	43	43	46	40
Aust. Cap. Territory	939	17	18	20	22	29
Total ..	2,974,581	9,566	9,528	9,373	9,515	9,980

(*a*) 30th June of year following.

The figures for New South Wales for 1946 exclude 16 " black trackers " and 5 " cadet trackers " (i.e., natives employed in detection of offenders chiefly in outlying districts) and 4 matrons, while the Victorian returns exclude 1 matron and 1 black tracker. For Queensland the figures exclude 35 black trackers, for South Australia 3 wardresses and 5 black trackers, for Western Australia 31 black trackers and 5 female searchers, and for the Northern Territory 34 black trackers. Women police are employed in all the States, the respective numbers for 1946 included in the table above being :—New South Wales 25, Victoria 15, Queensland 8, South Australia 19, Western Australia 9, and Tasmania 4. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms by the Chief Officers of Police. In his Report for 1946 the Commissioner of Police in New South Wales refers to the valuable work performed by the women police in connexion with vice and crime, particularly in relation to females and neglected children. They also carry out escort duties in respect of female prisoners. The experience in other States has been of a similar nature.

(ii) *Proportion to Population.* The average number of persons in the various States to each police officer during 1939 and the years 1943 to 1946 is shown in the following table. In considering these figures allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

POLICE FORCES IN RELATION TO POPULATION.

State or Territory.	Number of Persons per Sq. Mile. 1947 Census.	Persons to each Police Officer.				
		1939.	1943.	1944.	1945.	1946.
New South Wales	9.65	708	774	799	791	725
Victoria	23.39	807	876	905	946	928
Queensland (*a*)	1.65	704	613	623	626	638
South Australia (*a*)	1.70	662	715	710	689	702
Western Australia (*a*) ..	0.52	789	828	854	787	761
Tasmania (*a*)	9.81	812	787	869	795	819
Northern Territory (*a*) ..	0.02	167	243	244	229	272
Aust. Cap. Territory	18.00	767	766	730	701	565
Total	2.55	733	765	786	782	756

(*a*) 30th June of year following.

4. **Prison Accommodation and Prisoners, 1945 and 1946.**—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners in confinement at the end of 1945 and 1946 :—

PRISON ACCOMMODATION AND PRISONERS.

State or Territory.	Number of Prisons.		Accommodation in—				Prisoners at End of Year.	
			Separate Cells.		Wards.			
	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.
New South Wales(*a*) ..	14	16	2,012	2,214	..	..	1,684	1,768
Victoria	8	8	1,200	1,200	256	256	966	952
Queensland	10	9	596	612	182	170	493	356
South Australia ..	15	15	673	672	174	173	213	250
Western Australia(*a*) ..	21	21	431	431	182	182	279	290
Tasmania(*a*)	1	1	142	142	4	4	96	120
Northern Territory ..	2	2	11	12	5	19	4	19
Total	71	72	5,065	5,283	803	804	3,735	3,755

(*a*) Year ended 30th June following.

The figures refer to prisoners under sentence and exclude aborigines. There are no gaols in the Australian Capital Territory, but there is a lock-up consisting of three cells attached to the police station at Canberra and a lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by the Magistrate's Court.

5. **Prisoners in Gaol, 1939, 1943 to 1946.**—The number of prisoners in gaol at 31st December in each of the years 1939 and 1943 to 1946 and the proportion per 10,000 of the population are given in the following table. The figures refer to prisoners under sentence and exclude aborigines.

PRISONERS IN GAOL.

State or Territory.	1939.	1943.	1944.	1945.	1946.
		NUMBER.			
New South Wales (*a*) ..	1,357	1,739	1,856	1,684	1,768
Victoria	1,144	1,089	1,101	966	952
Queensland	261	318	473	493	356
South Australia ..	199	232	224	213	250
Western Australia (*a*) ..	244	259	294	279	290
Tasmania (*a*)	108	80	87	96	120
Northern Territory ..	23	(*a*) 45	22	4	19
Total	3,336	3,762	4,057	3,735	3,755
		PER 10,000 OF THE POPULATION.			
New South Wales (*a*) ..	4.9	6.0	6.4	5.7	5.9
Victoria	6.1	5.5	5.5	4.8	4.7
Queensland	2.6	3.0	4.4	4.5	3.2
South Australia	3.3	3.8	3.6	3.4	3.9
Western Australia (*a*) ..	5.2	5.4	6.0	5.7	5.8
Tasmania (*a*)	4.5	3.3	3.5	3.8	4.7
Total	4.8	5.2	5.5	5.0	5.0

(*a*) 30th June of year following.

After remaining stationary at 6.5 per 10,000 for the four years ended 1932 the proportion of prisoners in gaol to the total population declined each year to 4.5 in 1937. It fluctuated slightly during the next four years but remained under 5.0. The proportion was 4.9 in 1942 and rose slightly above this rate to 5.5 in 1944 and fell to 5.0 in 1945 and 1946. This figure compares most favourably with that obtaining in 1891, when the proportion was as high as 16 per 10,000. Rates for the Northern Territory have not been included on account of the prevailing abnormal conditions.

6. **Improvement in Prison Methods.**—In previous issues of the Official Year Book a fairly detailed account is given of the improvements effected in each State during recent years in regard to methods of prison management (see Official Year Book No. 22, pp. 471–4), but this information is not repeated in the present volume.

§ 5. Cost of Administration of Justice.

1. **Expenditure by the States.**—The table below shows the expenditure from Consolidated Revenue during 1938–39 and 1944–45 and 1945–46 in connexion with the administration of justice in each of the States.

It is difficult to obtain comparable figures of the total costs of the various services under this heading, therefore net costs have been substituted for gross expenditure. It will be noted that in South Australia and Western Australia the receipts for legal fees and registrations exceed the actual expenditure under "Justice".

NET EXPENDITURE ON JUSTICE.

State.	Net Expenditure.			Per Head of Population.		
	Justice.	Police.	Prisons.	Justice.	Police.	Prisons.
	£	£	£	*s. d.*	*s. d.*	*s. d.*
			1938–39.			
New South Wales ..	178,941	1,445,819	199,625	1 4	10 7	1 6
Victoria	104,903	796,626	103,202	1 1	8 6	1 1
Queensland.. ..	66,095	580,581	35,144	1 4	11 6	0 8
South Australia ..	−27,876	306,387	36,171	−0 11	10 4	1 3
Western Australia ..	−28,962	251,311	28, 66	−1 3	10 9	1 3
Tasmania	22,780	118,478	15,071	1 11	10 0	1 3
Total ..	315,881	3,499,202	417,679	0 11	10 1	1 2
			1944–45.			
New South Wales ..	226,852	1,536,644	268,603	1 7	10 7	1 10
Victoria	131,117	988,317	123,633	1 4	9 11	1 3
Queensland.. ..	60,491	841,618	58,515	1 2	15 9	1 1
South Australia ..	−24,602	355,556	37,525	−0 9	11 5	1 2
Western Australia ..	−1,285	264,795	40,772	−0 1	10 11	1 8
Tasmania	26,618	134,012	18,567	2 2	10 10	1 6
Total ..	419,191	4,120,942	547,615	1 2	11 3	1 6
			1945–46.			
New South Wales ..	238,016	1,655,187	275,254	1 7	11 3	1 11
Victoria	126,474	1,025,804	133,632	1 3	10 2	1 4
Queensland.. ..	75,501	881,549	40,175	1 5	16 3	0 9
South Australia ..	−39,679	383,447	38,152	−1 3	12 2	1 3
Western Australia ..	−10,432	275,543	46,208	−0 5	11 3	1 11
Tasmania	26,424	147,007	23,302	2 1	11 9	1 10
Total ..	416,304	4,368,537	556,723	1 1	11 10	1 6

2. **Commonwealth Expenditure.**—The expenditure shown in the previous table is that incurred by the State Governments only, and does not include expenditure of the Commonwealth Attorney-General's Department, which is given hereunder for the years 1938–39 and 1941–42 to 1945–46 :—

EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT.

Year.	Gross Expenditure.	Receipts.	Net Expenditure.
	£	£	£
1938–39	281,497	111,036	170,461
1941–42	319,171	90,820	228,351
1942–43	351,452	103,919	247,533
1943–44	386,749	117,128	269,621
1944–45	433,646	140,198	293,448
1945–46	472,604	135,239	337,365

The totals for each year include expenditure in connexion with patents and copyright which amounted in 1945–46 to £67,897. The Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1945–46 amounted to £39,679, including the salary of the Commonwealth Judge, £2,500. Expenditure in connexion with the Australian Capital Territory police amounted in 1945–46 to £13,279, and £6,413 was expended on miscellaneous items including the Law Court, Titles Office and Industrial Board. Revenue of the Attorney-General's Department amounted for the year 1945–46 to £135,239, comprising £95,122 for patents, copyright, trademarks and designs, £14,526 for bankruptcy and £25,591 miscellaneous, including fees and fines.

In addition to the foregoing a sum of £32,650 was expended in the Northern Territory during 1944–45 and £38,440 in 1945–46 by the Department of the Interior on the administration of justice, including the costs of the police force and prisons.

CHAPTER VIII.

PUBLIC BENEVOLENCE, ETC.

A. INTRODUCTION.

Charity and charitable effort in Australia may be classified under three headings: (*a*) State; (*b*) public; and (*c*) private. To the first belong all institutions wholly provided for by the State, such as the principal mental hospitals in the various States, the Government and leased hospitals in Western Australia, and the Government homes for the infirm in New South Wales. The other classes comprise public institutions of two kinds, namely :—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the former division belong such institutions as the principal metropolitan hospitals. In the latter are included institutions established and endowed by individuals for the benefit of the needy generally. All charitable movements of a private character are included in the third group. A more or less accurate statistical account is possible in classes (*a*) and (*b*), but in regard to (*c*) complete tabulation is, for obvious reasons, impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

No poor-rate is levied in Australia. Reference to age and invalid pensions, funeral benefits, maternity allowances, child endowment, widows' pensions, hospital benefits, tuberculosis benefits, and unemployment and sickness benefits which are provided by the Commonwealth Government from the National Welfare Fund under the Social Services Consolidation Act 1947 will be found later in this Chapter.

From time to time relief funds have been organized for famine-stricken countries in various parts of the world, or for places where plagues, flood, fire, or earthquake have shown the need of urgent relief. Special funds were also raised for persons disabled or bereaved through war. Complete statistical information in regard to these forms of charity is not, however, available. It may be mentioned that the daily Press frequently accepts the duty of collectorship in charity appeals. In regard to subscriptions to the various patriotic funds which were instituted in consequence of the 1914–18 War, the total for Australia was estimated to exceed £12,500,000.

B. THE LARGER CHARITIES OF AUSTRALIA.

§ 1. Public Hospitals (other than Mental Hospitals).

1. **General.**—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, tubercular patients, women, children, incurables, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to hospitals operating under the control of the Hospitals Commission.

2. **Principal Hospitals in each State.**—In earlier issues of the Official Year Book (see No. 22, pp. 481–2) particulars respecting staff, accommodation, etc., of each of the principal hospitals were given.

3. **Number, Staff and Accommodation, 1945–46.**—Details regarding the number of hospitals, staffs and accommodation for the year 1945–46 are given in the following table :—

PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Number of Hospitals ..	223	75	119	58	87	23	1	586
Medical Staff—								
Honorary	2,009	805	107	364	112	88	8	3,493
Salaried	383	306	258	103	43	50	2	1,145
Total	2,392	1,111	365	467	155	138	10	4,638
Nursing Staff	6,485	4,074	3,307	1,442	1,218	644	55	17,225
Accommodation— Number of beds and cots	17,340	9,204	7,299	2,993	3,479	1,811	160	42,286

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in out-door or verandah sleeping places.

4. **In-Patients Treated.**—The following table furnishes particulars of in-patients treated. (Newborn are excluded.)

PUBLIC HOSPITALS : IN-PATIENTS TREATED, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Inmates at beginning of year—								
Males	5,294	2,384	2,341	913	990	484	38	12,444
Females	6,807	2,764	2,665	1,127	951	667	56	15,037
Total	12,101	5,148	5,006	2,040	1,941	1,151	94	27,481
Admissions and Re-admissions during year—								
Males	121,116	37,791	68,236	19,956	28,305	10,772	1,219	287,395
Females	161,369	50,169	74,145	24,702	25,810	15,280	1,576	353,051
Total	282,485	87,960	142,381	44,658	54,115	26,052	2,795	640,446
Total in-patients treated—								
Males	126,410	40,175	70,577	20,869	29,295	11,256	1,257	299,839
Females	168,176	52,933	76,810	25,829	26,761	15,947	1,632	368,088
Total	294,586	93,108	147,387	46,698	56,056	27,203	2,889	667,927
Discharges—								
Males	115,594	34,691	64,884	18,555	27,089	10,171	1,187	272,171
Females	157,313	48,069	71,887	23,525	25,092	14,711	1,550	342,147
Total	272,907	82,760	136,771	42,080	52,181	24,882	2,737	614,318
Deaths—								
Males	5,567	2,921	2,970	1,299	1,134	571	34	14,496
Females	4,264	2,045	1,982	1,042	688	504	22	10,547
Total	9,831	4,966	4,952	2,341	1,822	1,075	56	25,043
Inmates at end of year—								
Males	5,249	2,563	2,723	1,015	1,072	514	36	13,172
Females	6,599	2,819	2,941	1,262	981	732	60	15,394
Total	11,848	5,382	5,664	2,277	2,053	1,246	96	28,566
Average Daily Number Resident	12,495	5,229	5,337	2,160	2,017	1,191	101	28,530

In addition to those admitted to the institutions there are large numbers of out-patients. During 1945–46 there were 678,408 out-patients treated in New South Wales, 281,146 in Victoria, 308,498 in Queensland, 67,453 in South Australia, 52,699 (estimated) in Western Australia, 27,816 (estimated) in Tasmania and 3,862 in the Australian Capital Territory, making a total for Australia of 1,419,882.

5. **Revenue and Expenditure.**—The revenue and expenditure for the year 1945–46 were as follows. The revenue includes the Commonwealth Hospital Benefit Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946 (*see* Part C., § 6 following).

PUBLIC HOSPITALS: REVENUE AND EXPENDITURE, 1945 46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	A.C.T.	Total.
Revenue—	£	£	£	£	£	£	£	£
Government Aid ..	*a*2,221,205	1,728,515	1,229,644	417,886	411,609	196,813	33,245	6,238,917
Commonwealth Hospital Benefits ..	..	227,131	207,117	49,488	78,031	33,582	..	595,349
Municipal Aid ..	(*b*)	94,136	..	53,702	960	..	..	148,798
Public Subscriptions, Legacies, etc.	(*c*) 892,345	556,367	18,041	66,732	37,006	13,785	..	1,584,270
Fees	1,236,655	653,098	444,420	231,676	247,557	118,033	5,405	2,936,844
Other	(*d*)139,698	109,514	36,616	29,172	9,461	35,700	795	360,950
Total 1945–46 ..	4,489,903	3,368,761	1,935,838	848,656	784,624	397,913	39,445	11,865,140
1944–45 ..	4,201,246	2,840,957	1,683,483	739,331	661,074	317,635	38,562	10,482,288
Expenditure—								
Salaries and Wages	2,510,800	1,296,014	1,012,708	405,551	346,745	220,062	19,983	5,811,863
Upkeep and Repair of Buildings and Grounds ..	186,948	122,215	35,623	46,315	24,358	11,396	2,145	429,000
All Other Ordinary	1,761,676	1,146,522	941,512	344,302	279,390	166,040	17,308	4,656,750
Capital (*e*) ..	(*f*)	300,078	1,296	33,373	127,613	..	11,375	(*g*)473,735
Total 1945–46 ..	4,459,424	2,864,829	1,991,139	829,541	778,106	397,498	50,811	11,371,348
1944–45 ..	3,973,970	2,053,446	1,765,854	735,010	651,617	317,447	38,608	9,535,952

(*a*) Includes State aid for buildings, £137,511. (*b*) Included in "Other". (*c*) Includes legacies and bequests for capital purposes, £35,453. (*d*) Includes loans raised under Section 37 of the Public Hospitals Act, £508. (*e*) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings. (*f*) Not available. (*g*) Incomplete.

6. **Summary, 1938–39 and 1942–43 to 1945–46.**—A summary for the years 1938–39 and 1942–43 to 1945–46 of the number of hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue, and expenditure is given in the following table. The figures relate to both general and special hospitals.

PUBLIC HOSPITALS: AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Institutions ..	No.	563	563	567	572	586
Medical Staff ..	,,	4,059	3,801	4,021	4,198	4,638
Nursing Staff ..	,,	13,582	15,987	16,484	16,852	17,225
Beds and cots ..	,,	35,711	38,776	39,701	39,971	42,286
Admissions during year	,,	527,055	587,804	608,679	627,284	640,446
Total indoor cases treated	No.	552,051	613,286	635,516	654,903	667,927
Out-patients (cases) (*a*)	,,	1,272,147	1,253,819	1,263,283	1,349,795	1,419,882
Deaths	,,	23,372	25,940	26,077	24,293	25,043
Average daily resident	,,	25,608	26,152	27,689	28,584	28,530
Revenue	£	7,106,642	8,874,052	9,531,505	10,482,288	11,865,140
Expenditure ..	£	6,351,055	8,034,248	8,708,950	9,535,952	11,371,348

(*a*) Estimates for South Australia, Western Australia and Tasmania.

§. 2. Benevolent and Destitute Asylums.

1. **General.**—The public provisions for the care of indigent old people has been a feature of the social development of recent years in most countries. Numerous establishments exist in Australia for the housing and protection of persons no longer able to provide for themselves. These institutions are supported by Government and municipal aid, public subscriptions, bequests, etc.; while in many cases relatives of poor and afflicted persons contribute to their maintenance.

An entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially difficult in the case of benevolent institutions, because the services provided by these institutions are not always identical.

2. **Principal Institutions.**—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (see No. 22, p. 485).

3. **Revenue and Expenditure.**—Details regarding revenue and expenditure for the year 1945–46 are given in the following table :—

BENEVOLENT ASYLUMS : REVENUE AND EXPENDITURE, 1945–46.

Particulars.	N.S.W. (*a*)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue—	£	£	£	£	£	£	£
Government Aid	175,924	120,388	63,916	17,413	8,060	29,468	415,169
Municipal Aid ..	..	1,114	..	..	..	..	1,114
Public Subscriptions, Legacies	..	36,814	5,348	..	..	755	42,917
Fees	71,192	70,344	61,709	10,222	28,513	20,313	262,293
Other.. ..	..	9,593	20,305	6,062	351	1,701	38,012
Total 1945–46	247,116	238,253	151,278	33,697	36,924	52,237	759,505
1944–45	224,684	221,165	141,937	27,836	35,169	45,567	696,358
Expenditure—							
Salaries and Wages ..	125,227	115,860	55,076	13,791	19,815	28,884	358,653
Upkeep and Repair of Buildings ..	6,439	12,598	5,226	3,982	898	1,659	30,802
All Other(*b*) ..	115,450	99,373	90,300	15,724	16,211	21,479	358,537
Total 1945–46	247,116	227,831	150,602	33,497	36,924	52,022	747,992
1944–45	224,684	205,406	141,358	27,836	35,169	44,959	679,412

(*a*) These figures relate to the three State Hospitals and Homes only, at 31st December, 1945.
(*b*) Includes £14,597 in Victoria, £4,374 in Queensland, £901 in Western Australia and £500 in Tasmania, covering such items as Purchases of Land, Cost of New Buildings and Additions to Buildings.

§ 3. Orphanages, Industrial Schools, etc.

1. **General.**—The methods of caring for orphans and neglected children differ extensively, inasmuch as some of the children are more or less segregated in orphanages and industrial schools, while others are boarded-out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions may receive, in addition to primary education, some craft training. In all cases employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded-out live are subject to frequent departmental inspections.

2. **Principal Institutions.**—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (see No. 22, p. 486).

3. **Transactions of State Departments.**—The following table summarizes the transactions during 1945–46 of State Departments in connexion with children under their control or supervision. In addition to neglected children, the figures include uncontrollable and convicted children who are wards of a Government authority, as well as poor children whose parents obtain assistance from the Government without giving up the legal right of custody :—

CHILDREN UNDER GOVERNMENT AUTHORITY : SUMMARY, 1945-46.

Particulars.	N.S.W.	Vic. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
A. Children maintained or subsidized by the State.	No.	No.	No.	No.	No.	No.	No
In State shelters, industrial schools, reformatories, etc.(*b*)	1,170	217	1,080	188	66	45	2,766
In licensed or approved institutions	..	1,594	..	44	440	180	2,258
Boarded-out—							
With own mothers ..	6,318	2,881	3,234	125	41	..	12,599
With licensed foster-mothers, guardians, relatives and friends	1,776	691	348	*c* 3,288	240	214	6,557
Total children maintained or subsidized by the State	9,264	5,383	4,662	3,645	787	439	24,180
B. Children not maintained or subsidized by the State.							
In licensed or approved institutions	1,453	..	..	42	741	..	2,236
Boarded out	162	..	..	1,040	444	..	1,646
On probation (from Institutions or Children's Courts)	2,464	1,552	126	442	392	..	4,976
In service or apprenticed	104	292	323	157	54	..	930
Adopted or otherwise placed	261	173	22	839	121	..	1,416
Total children not maintained or subsidized by the State	4,444	2,017	471	2,520	1,752	..	11,204
Total children under State control or supervision ..	13,708	7,400	5,133	6,165	2,539	439	35,384
	£	£	£	£	£	£	£
Gross cost of children's relief	435,365	202,457	170,142	77,593	19,611	12,368	917,536
Receipts from parents' contributions, etc. ..	37,604	16,159	16,835	11,835	8,173	2,029	92,635
Net cost to State,							
1945–46 ..	397,761	186,298	153,307	65,758	11,438	10,339	824,901
1944–45 ..	386,281	193,234	151,745	63,921	12,207	10,329	817,717

(*a*) Year ended 31st December, 1945. (*b*) Includes inmates of hospitals. (*c*) Include 2,979 children in receipt of Ration Relief.

The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

§ 4. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (Channel Island, near Darwin). At the end of 1946 there were 17 cases in residence at Little Bay, 46 at Peel Island, 78 at Fantome Island, 231 at Derby, 71 at Channel Island, and 4 isolated cases in the south of Western Australia. Of the 447 cases, 331 were aboriginals, 46 Asiatics and 70 Europeans.

§ 5. Mental Hospitals.

1. **General.**—The methods of compiling statistics of insanity are fairly uniform throughout the States, but there is an element of uncertainty as to possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian hospitals.

2. **Hospitals, Staff, etc., 1945–46.**—Particulars regarding the number of institutions, the medical and nursing staffs, and accommodation are given in the following table for the year 1945–46 :—

MENTAL HOSPITALS : NUMBER, STAFFS, ACCOMMODATION, 1945–46.(*a*)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of Institutions ..	12	9	5	2	4	1	33
Medical Staff—							
Males	28	35	10	8	4	2	87
Females	6	..	1	..	..	1	8
Total	34	35	11	8	4	3	95
Nursing Staff and Attendants—							
Males	791	559	320	176	136	78	2,060
Females	816	390	289	139	49	60	1,743
Total	1,607	949	609	315	185	138	3,803
Accommodation—							
Number of beds and cots	11,649	6,710	3,874	2,091	1,446	750	26,520

(*a*) The figures relate to years ended as follows :—New South Wales, Queensland, South Australia and Tasmania—30th June, 1946; Victoria and Western Australia—31st December, 1945.

3. **Patients, 1945–46.**—Information regarding patients treated, deaths, etc., for 1945–46 is given in the following table :—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC. 1945–46.(*a*)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of distinct persons treated during year (*b*)—							
Males	6,730	3,873	2,371	1,133	983	404	15,494
Females	6,815	4,287	2,154	1,103	646	427	15,432
Total	13,545	8,160	4,525	2,236	1,629	831	30,926

(*a*) See footnote (*a*) to previous table. (*b*) Excludes transfers to other institutions.

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1945-46 (*a*)—*continued.*

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	Total.
Number of patients on books at beginning of year—							
Males	5,940	3,425	2,029	994	890	325	13,603
Females	5,910	3,817	1,811	960	575	331	13,404
Total	11,850	7,242	3,840	1,954	1,465	656	27,007
Admissions and re-admissions excluding absconders retaken and transfers from other institutions—							
Males	790	448	342	139	93	79	1,891
Females	905	470	343	143	71	96	2,028
Total	1,695	918	685	282	164	175	3,919
Discharges (including absconders not retaken)—							
Males	397	173	158	27	25	51	831
Females	446	199	194	30	30	62	961
Total	843	372	352	57	55	113	1,792
Deaths—							
Males	404	222	163	80	60	35	964
Females	433	304	134	75	39	27	1,012
Total	837	526	297	155	99	62	1,976
Number of patients on books at end of year—							
Males	5,929	3,478	2,050	1,026	898	318	13,699
Females	5,936	3,784	1,826	998	577	338	13,459
Total	11,865	7,262	3,876	2,024	1,475	656	27,158
Average daily number resident—							
Males	5,561	2,976	2,000	1,012	863	323	12,735
Females	5,416	3,304	1,745	961	552	334	12,312
Total	10,977	6,280	3,745	1,973	1,415	657	25,047
Number of patients on books at end of year per 1,000 of population—							
Males	4.03	3.49	3.66	3.26	3.57	2.51	3.68
Females	4.03	3.71	3.45	3.12	2.42	2.70	3.62
Total	4.03	3.60	3.56	3.19	3.01	2.60	3.65
Average number of patients resident in mental hospitals per 1,000 of mean population—							
Males	3.80	3.00	3.59	3.24	3.44	2.57	3.44
Females	3.69	3.25	3.31	3.02	2.33	2.68	3.34
Total	3.74	3.13	3.45	3.13	2.90	2.62	3.38

(*a*) See footnote (*a*) to previous table.

Persons who are well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept in the records.

4. **Revenue and Expenditure, 1945–46.**—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 83 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian hospitals.

MENTAL HOSPITALS : FINANCES, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—	£	£	£	£	£	£	£
Fees of Patients ..	165,382	86,754	51,655	50,741	30,014	9,609	394,155
Other	17,365	12,653	1,885	9	2,606	278	34,796
Total	182,747	99,407	53,540	50,750	32,620	9,887	428,951
Expenditure—							
Salaries and Wages ..	601,251	335,429	227,583	120,481	97,946	64,014	1,446,704
Upkeep and Repair of Buildings, &c. ..	39,773	..	2,491	12,383	7,250	1,534	63,431
All Other(*a*)	408,975	344,417	134,593	85,076	63,523	32,680	1,069,264
Total	1,049,999	679,846	364,667	217,940	168,719	98,228	2,579,399
Expenditure per Average Daily Resident ..	£95/13/1	£108/5/2	£97/7/6	£110/9/3	£119/4/9	£149/10/2	£102/19/8

(*a*) Includes the following amounts for capital expenditure on Purchases of Land, Cost of New Buildings, and Additions to Buildings: New South Wales, £16,554; Victoria, £53,250; South Australia, £190; and Western Australia, £2,001.

5. **Summary for Australia, 1938–39 and 1942–43 to 1945–46.**—The following table gives a summary of mental hospitals in Australia during 1938–39 and for each of the years 1942–43 to 1945–46 :—

MENTAL HOSPITALS : SUMMARY, AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Institutions	No.	35	32	33	32	33
Medical Staff	,,	92	92	97	89	95
Nursing Staff	,,	4,922	3,714	3,958	4,104	3,803
Beds	,,	25,654	25,977	26,246	26,177	26,520
Admissions	,,	3,757	3,869	3,858	3,674	3,919
Discharged as recovered, relieved, etc.	,,	1,800	2,052	2,017	1,703	1,792
Deaths	,,	1,632	1,992	1,977	1,834	1,976
Inmates at end of year ..	,,	26,509	26,977	26,841	26,978	27,158
Revenue (excluding Government Grants)	£	262,817	388,213	389,699	427,278	428,951
Expenditure—Total ..	£	1,903,817	2,138,957	2,308,995	2,409,317	2,579,399
,, —Per Average Daily Resident..		£79/2/4	£84/16/9	£92/7/2	£97/10/4	£102/19/8

6. **Number of Mental Patients, 1938–39 and 1942–43 to 1945–46.**—The total number returned as under treatment shows slight fluctuations during the period but the proportion to total population shows a slight decline to 1945–46. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in insanity.

MENTAL PATIENTS IN INSTITUTIONS.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
			NUMBER.		
New South Wales	11,678	11,954	11,789	11,850	11,865
Victoria	7,326	7,256	7,252	7,242	7,262
Queensland	3,650	3,749	3,819	3,840	3,876
South Australia	1,747	1,892	1,889	1,925	2,024
Western Australia	1,477	1,474	1,452	1,465	1,475
Tasmania	631	652	640	656	656
Australia	26,509	26,977	26,841	26,978	27,158
			PER 1,000 OF POPULATION.		
New South Wales	4.25	4.18	4.08	4.06	4.03
Victoria	3.92	3.70	3.66	3.62	3.60
Queensland	3.59	3.58	3.60	3.57	3.56
South Australia	2.93	3.09	3.05	3.07	3.19
Western Australia	3.16	3.09	3.04	3.02	3.01
Tasmania	2.66	2.69	2.61	2.64	2.60
Australia	3.81	3.74	3.68	3.66	3.65

The difference between States in the number of mental patients in institutions per 1,000 of population may be due to some extent to differences in classification.

7. **Causes of Insanity.**—The general information available respecting the causes of the insanity of persons admitted to institutions is too unsatisfactory to enable a classification of patients by cause of insanity to be given.

8. **Length of Residence in Hospital, 1945–46.**—(i) *New South Wales and Victoria.* Particulars are not available regarding the average length of residence in hospitals of persons who died or were discharged during the year.

(ii) *Queensland.* The average residence of those who died during 1945–46 was 10 years 9 days for males, and 6 years 129 days for females; of those discharged, 1 year 44 days for males, and 1 year 72 days for females.

(iii) *South Australia.* The average residence of those who died during 1945–46 was 5 years 6 months 5 days for males, and 5 years 4 months 25 days for females; of those discharged, 2 years 3 months 23 days for males, and 3 years 8 months 1 day for females.

(iv) *Western Australia.* The average residence of those who died in 1945 was 13 years 10 months 10 days for males, and 5 years 6 months 25 days for females; of those discharged, 4 years 6 months 12 days for males, and 4 years 7 months 11 days for females.

(v) *Tasmania.* The average residence of those who died during 1945–46 was 12 years 180 days for males, and 11 years 60 days for females; of those discharged, 314 days for males, and 175 days for females.

§ 6. Protection of Aborigines.

For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come near the stations. The native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1945–46 was as follows; figures in brackets are for year 1944–45 :—New South Wales, £53,046 (£52,894); Victoria, £6,385 (£5,400); Queensland, £115,689 (£97,411); South Australia, £28,986 (£31,466); Western Australia, £69,747 (£61,398); Northern Territory, £35,071 (£24,961); Australian Capital Territory, £664 (£640); total for Australia, £309,588 (£274,170). At a census of aborigines taken at 30th June, 1944 in all States except New South Wales the number of full-blood and half-caste aborigines living in supervised camps was as follows (particulars for New South Wales as at 30th June, 1941 have been added) :—

ABORIGINES IN SUPERVISED CAMPS, 30th JUNE, 1944.

Particulars.	New South Wales. (a)	Victoria.	Queensland.	South Australia.	Western Australia.	Northern Territory.	Total. (b)
	No.	No.	No.	No.	No.	No.	No.
Full-bloods ..	373	18	4,298	726	4,450	8,361	18,227
Half-castes ..	4,114	229	2,271	1,118	1,698	449	9,980

(a) At 30th June, 1941. (b) Includes one full-blood and 101 half-castes in the Australian Capital Territory.

Particulars regarding total number of aborigines in each State will be found in the Chapter XVI. "Population".

§ 7. Royal Life Saving Society.

In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have also been established in the larger provincial districts. In 1934 an Australian Federal Council of this Society was formed with head-quarters at Melbourne, and each State centre, or branch, as it is now called, is controlled by the new organization. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (*a*) educative and (*b*) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, warning provisions, and other first-aid appliances on ocean beaches, wharves and other suitable places. Numerous certificates of proficiency in various grades are issued annually after examination throughout Australia, the number for the individual States for 1946–47 being :—New South Wales, 9,586; Victoria, 5,419; Queensland, 1,782; South Australia, 1,100; Western Australia, 1,774; Tasmania, 708; and Fiji, which comes under the control of the Australian Federal Council, 1,032.

§ 8. Royal Humane Society.

The Royal Humane Society of Australasia has for its objects (*a*) to grant awards for skill, promptness and perseverance in life-saving, where the rescuer has risked his or her life; (*b*) to provide assistance in cases of danger and apparent death; (*c*) to restore the apparently drowned; (*d*) to collect and circulate the latest information regarding approved methods and apparatus for life-saving. Awards of medals and certificates are made numbering about 100 annually.

§ 9. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include asylums for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, free kindergartens, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fire, flood and mining accident relief funds, etc.

§ 10. Total Expenditure on Charities.

Issues of the Official Year Book prior to No. 24 embodied statistics of expenditure on charities. The returns available, however, included a portion only of direct expenditure by Governments, and, in general, there is lack of harmony in the information available for the different States. Pending the result of further inquiry it has been decided to omit this table from the present chapter.

C. SOCIAL SERVICES BENEFITS.

§ 1. Commonwealth Age and Invalid Pensions.

1. **General.**—The social services benefits are incorporated under the Social Services Consolidation Act 1947 and are financed from the National Welfare Fund. In previous issues of the Official Year Book an account is given of the introduction of the age pension system in Australia, together with a detailed description of the Commonwealth Invalid and Old-age Pensions Act 1908, which became operative on 1st July, 1909. Invalid pensions were first paid from 15th December, 1910. The following statement shows the rates of pension at July, 1909, and the rates as they have been varied since that date :—

RATES OF PENSION PAYABLE.

Date from which Operative.	Pension Payable—						Pensioner's Maximum Income including Pension.					
	Annual Rate.			Weekly Equivalent.			Annual Rate.			Weekly Equivalent.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1st July, 1909	26	0	0	0	10	0	52	0	0	1	0	0
12th October, 1916	32	10	0	0	12	6	58	10	0	1	2	6
1st January, 1920	39	0	0	0	15	0	65	0	0	1	5	0
13th September, 1923.. ..	45	10	0	0	17	6	78	0	0	1	10	0
8th October, 1925	52	0	0	1	0	0	84	10	0	1	12	6
23rd July, 1931	45	10	0	0	17	6	78	0	0	1	10	0
13th October, 1932	45	10	0	0	17	6	71	10	0	1	7	6
26th October, 1933	45	10	0	0	17	6	78	0	0	1	10	0
4th July, 1935	46	16	0	0	18	0	79	6	0	1	10	6
24th September, 1936.. ..	49	8	0	0	19	0	81	18	0	1	11	6
9th September, 1937	52	0	0	1	0	0	84	10	0	1	12	6
26th December, 1940	54	12	0	1	1	0	87	2	0	1	13	6
3rd April, 1941	55	18	0	1	1	6	88	8	0	1	14	0
11th December, 1941	61	2	0	1	3	6	93	12	0	1	16	0
2nd April, 1942	65	0	0	1	5	0	97	10	0	1	17	6
1st October, 1942	66	6	0	1	5	6	98	16	0	1	18	0
7th January, 1943	67	12	0	1	6	0	100	2	0	1	18	6
1st April, 1943	68	18	0	1	6	6	101	8	0	1	19	0
19th August, 1943	70	4	0	1	7	0	102	14	0	1	19	6
25th November, 1943(*a*) ..	68	18	0	1	6	6	101	8	0	1	19	0
25th November, 1943 ..	70	4	0	1	7	0	102	14	0	1	19	6
5th July, 1945	84	10	0	1	12	6	117	0	0	2	5	0
13th August, 1946	84	10	0	1	12	6	136	10	0	2	12	6
3rd July, 1947	97	10	0	1	17	6	149	10	0	2	17	6

(*a*) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulation 112A—Statutory Rule 315 of 1943.

From 13th August, 1946, the annual rate at which an age or invalid pension, except for a blind pensioner, is determined was reduced by the amount (if any) by which the income of the pensioner apart from the pension exceeds £52 per annum and by £1 for every complete £10 of property between £50 and £400 and by £2 for every complete £10 between £401 and £650.

In addition to the existing provision for the exemption of the value of a pensioner's home in the assessment of property, exemption applies also in respect of the value of furniture and personal effects, surrender values of life assurance policies up to £200, the capital values of life interests, or annuities and contingent interests in property, the present value of reversionary interests up to £500 and the value of any property to which a person is entitled from an estate but which has not been received by that person.

A single adult invalid pension claimant will be subject to a means test only in respect to his own income and property.

Particulars relating to the provision of an adjustment of the pension rate in accordance with the variations of the Retail Price Index-number are given in the Official Year Book No. 35, p. 580. This provision was repealed by Act No. 16 of 1944 and the rate of pension reverted to £70 4s. per annum (£1 7s. per week).

Subject to the conditions of the Act, every person, who is not receiving an invalid pension, and who has attained the age of sixty-five years (in the case of females, sixty years), is, while in Australia, qualified to receive an age pension.

Asiatics and aboriginal natives of Australia, Africa, the islands of the Pacific or New Zealand generally, are not eligible to receive an age or invalid pension, but the Act was amended in November, 1941 to include those Asiatics who are British subjects, and in May, 1942, to include, under certain conditions, aboriginal natives of Australia and of the Pacific Islands.

Invalid pensions were granted from the 15th December, 1910. Subject to the conditions of the Act, every person above the age of sixteen years who is permanently incapacitated for work, and every permanently blind person above the age of sixteen years, provided that, in each case, an age pension is not being received, is, while in Australia, qualified to receive an invalid pension. A claimant for an invalid pension, or an invalid pensioner, may be required to undertake such training for a vocation or physical rehabilitation as is available. In 1920 special provision was made for a permanently blind person, by which the annual pension was at such a rate (not exceeding that shown in the table above), as would make his income plus that of his wife together with the pension equal to an amount not exceeding £221 per annum. This amount has since been varied from time to time. Under the amending Act of April, 1944, the amount of pension payable to a blind person was reducible by the amount (if any) by which the income of the pensioner and the pensioner's wife (or husband) exceeded £260 per annum (£5 per week). From 13th August, 1946, the permissible income was raised to £279 10s. per annum (£5 7s. 6d. per week) while the limit on property was increased from £400 to £650. Where a husband and wife are both blind and qualified to receive a pension only half the combined income in excess of £279 10s. per annum is deducted from each pension.

An amendment to the Act, assented to on 29th March, 1943, provided for the payment from 8th July, 1943 of an allowance not exceeding £39 per annum—from 3rd July, 1947 this allowance was increased to £52 per annum—to wives of invalid pensioners, provided that they themselves are not age or invalid pensioners. This allowance was subject to the deduction of the amount by which the other income of the wife exceeded £32 10s. per annum (12s. 6d. per week)—this allowance was increased to £52 per annum (£1 per week) from 13th August, 1946—£1 for every complete £10 by which the value of the property of the wife exceeds £50 up to £400 and by £2 for every complete £10 of the remainder of the property. Provision is also made for the payment of an additional allowance of £13 per annum (5s. per week) where there are children under sixteen years of age. From 1st July, 1943, an amount not to exceed £10 was payable towards the funeral costs of age and invalid pensioners.

During 1939–40 all invalid pensions in force were specially reviewed, and at 30th June, 1940 all those pensioners who had become qualified for age pensions by age and residence were transferred to the age pension list. This transference has been continued since that date, though the numbers involved are naturally much smaller. Reciprocity between Australia and New Zealand in respect of age and invalid pensions operated from 1st September, 1943.

2. **Age Pensions.**—(i) *Number in force.* At 30th June, 1946 there were 264,826 age pensions in force. During 1946–47, 47,734 age pensions claims were granted and 1,517 pensioners were transferred from the invalid pension list, while 23,904 pensions expired through cancellations and deaths. The net increase for the year was 25,347 and the total in force at 30th June, 1947, 290,173.

(ii) *Sexes of Pensioners—States.* Of the age pensioners at 30th June, 1947, 103,747 (or 36 per cent.) were males, and 186,426 (or 64 per cent.) were females. Details for each State are as follows :—

AGE PENSIONS : SEXES OF PENSIONERS AT 30th JUNE, 1947.

State.	Males.	Females.	Total.	Masculinity.(*a*)
New South Wales (*b*)	42,886	76,350	119,236	56.17
Victoria	25,160	49,610	74,770	50.72
Queensland	14,857	23,897	38,754	62.17
South Australia (*c*)	8,858	17,059	25,917	51.93
Western Australia	8,198	12,964	21,162	63.24
Tasmania	3,788	6,546	10,334	57.87
Total—30th June, 1947	103,747	186,426	290,173	55·65
„ 1946	96,569	168,257	264,826	57·39
„ 1945	92,565	160,069	252,634	57·83

(*a*) Number of males to each 100 females. (*b*) Includes Australian Capital Territory. (*c*) Includes Northern Territory.

(iii) *Ages and Conjugal Conditions of Pensioners.* The recorded ages of the 47,734 persons (17,629 males and 30,105 females) to whom age pensions were granted during the year 1946–47 varied considerably, ranging from 6,571 at age 60 to 1 at age 101, but 36,317 were in the 60–70 group. The conjugal condition of these new pensioners was as follows :—Males—single, 2,358 ; married, 11,902 ; and widowed, 3,369 : Females—single, 3,108 ; married, 13,627 ; and widowed, 13,370.

3. **Invalid Pensions.**—(i) *Number in force.* The number of invalid pensioners increased from 62,868 in 1945–46 to 68,277 in 1946–47, an increase of 5,409. Total pensions granted during the year were 12,842 while 5,916 pensions ceased through cancellations or deaths, and 1,517 were transferred to the age pension list.

(ii) *Sexes of Pensioners.* Of the 68,277 persons in receipt of invalid pensions on 30th June, 1947, 35,089, or 51 per cent. were males, and 33,188, or 49 per cent. were females. Details for the several States are as follows :—

INVALID PENSIONS : SEXES OF PENSIONERS AT 30th JUNE, 1947.

State.	Males.	Females.	Total.	Masculinity.(*a*)
New South Wales (*b*)	15,978	14,512	30,490	110.12
Victoria	7,277	7,396	14,673	98·39
Queensland	5,872	5,010	10,882	117.19
South Australia (*c*)	2,372	2,879	5,251	82·39
Western Australia	2,101	1,901	4,002	110.52
Tasmania	1,489	1,490	2,979	99·93
Total—30th June, 1947	35,089	33,188	68,277	105·73
„ 1946	31,619	31,249	62,868	101.18
„ 1945	28,552	29,729	58,281	96.04

(*a*) Number of males to each 100 females. (*b*) Includes Australian Capital Territory. (*c*) Includes Northern Territory.

(iii) *Ages and Conjugal Condition of Pensioners.* The recorded ages of the 12,842 persons (7,874 males and 4,968 females) to whom invalid pensions were granted during 1946–47 varied from 16 to 93, 5,705 or 44 per cent. being in the 45–59 years age-group.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,562; married, 4,805; and widowed, 507: Females—single, 2,420; married, 1,885; and widowed, 663.

4. **Cost of Administration.**—The total cost of administering age and invalid pensions, including wives' allowances and funeral benefits, was £256,504 in 1946–47, or 0.87 per cent. of the amount paid to pensioners, benevolent asylums and hospitals, and for wives' allowances. The corresponding cost in 1945–46 was £218,740, or 0.81 per cent. of the total payments.

The actual sum disbursed in age and invalid pensions in the financial year 1946–47 apart from the cost of administration but including the amount paid to asylums and hospitals for the maintenance of pensioners, and allowances to wives of invalid pensioners, was £29,416,673 (78s. 3d. per head of mean population). In 1945–46 it was £26,962,420 (72s. 7d. per head of mean population).

5. **Summary.**—The following table gives details of age and invalid pensions and approximate cost of administration for the five years 1938–39 and 1943–44 to 1946–47:—

AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA.

Year ended 30th June–	Number of Pensioners.				Amount Paid in Pensions.	Total Payment to Pensioners and Institutions. (*b*)	Cost of Administration (approximate).	Cost of Administration per £100 paid to Pensioners and Institutions (approximate).	Average Fortnightly Pension as at 30th June.
	Age.		Invalid.	Total.					
	No.	Est. No. per 1,000 of persons eligible on age qualification. (*a*)							
			No.	No.	£	£	£	s. d.	s. d.
1939	232,836	376	88,812	321,648	15,798,038	15,991,782	128,000	16 0	38 5
1944	257,186	355	57,942	315,128	21,479,933	21,699,100	201,000	18 6	51 11
1945	252,634	345	58,281	310,915	21,475,570	21,701,127	201,000	18 6	51 5
1946	264,826	358	62,868	327,694	26,735,092	26,962,420	218,740	16 3	*c*62 8
1947	290,173	381	68,277	358,450	29,295,099	29,416,673	256,504	17 5	62 8

(*a*) Based on an estimate of the aggregate of males aged 65 and over and females aged 60 and over at 30th June of each year. (*b*) Includes allowances to wives of invalid pensioners from 1943–44, but excludes funeral benefits in respect of deaths of pensioners, £105,356 in 1943–44; £163,993 in 1944–45; £184,478 in 1945–46; and £209,349 in 1946–47. (*c*) Changes in rate—see par. 1, page 296.

Separate particulars of the payments to age and invalid pensioners are not available but the total payments in 1946–47 in each State together with the annual liability at 30th June, 1947, are given in the following table :—

AGE AND INVALID PENSIONS : PAYMENTS AND ANNUAL LIABILITY.

State.	Total Payments Age and Invalid Pensions, 1946–47.(*a*)	Annual Liability at 30th June, 1947.		
		Age Pensions.	Invalid Pensions.	Total.
	£	£	£	£
New South Wales (*b*) ..	12,276,711	9,707,386	2,515,240	12,222,626
Victoria	7,350,132	6,077,344	1,203,514	7,280,858
Queensland	4,104,410	3,167,424	899,886	4,067,310
South Australia (*c*) ..	2,551,372	2,086,058	429,884	2,515,942
Western Australia	2,005,233	1,708,616	323,830	2,032,446
Tasmania	1,128,815	831,246	244,608	1,075,854
Total—1946–47 ..	29,416,673	23,578,074	5,616,962	29,195,036
1945–46 ..	26,962,420	21,509,670	5,173,766	26,683,436
1944–45 ..	21,701,127	16,804,411	3,985,124	20,789,535
1943–44 ..	21,699,100	17,314,986	3,968,770	21,283,756
1942–43 ..	22,292,835	17,702,594	3,913,130	21,615,724

(*a*) Includes amounts paid to Benevolent Asylums and Hospitals for the maintenance of pensioners, and allowances to wives of invalid pensioners. (*b*) Includes Australian Capital Territory. (*c*) Includes Northern Territory.

§ 2. Commonwealth Child Endowment.

1. **General.**—The Commonwealth Child Endowment Act came into operation on 1st July, 1941, and provided for payment of 5s. per week (increased to 7s. 6d. per week from 26th June, 1945) for each child in excess of one under 16 years of age maintained in a family, and for children under 16 years of age in approved institutions. During the year 1946–47, 61,406 claims were granted. Cancellations amounted to 35,495 and the number of endowed family claims in force at 30th June, 1947 was 559,730, an increase of 25,911 during the year.

2. **Summary.**—The following table shows particulars of the operations under the Child Endowment Act during the year ended 30th June, 1947 :—

CHILD ENDOWMENT : SUMMARY, 1946–47.

State.	Family Groups.					Total Payments to Endowees and Institutions.
	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1947.		
		Total.	Average per claim.	Total.	Average Liability per claim.	
	No.	No.	No.	£	£	£
New South Wales(*a*)	222,668	390,915	1.76	7,622,843	34.23	7,727,859
Victoria	141,826	240,810	1.70	4,695,795	33.11	4,908,922
Queensland ..	86,322	162,190	1.88	3,162,705	36.64	3,327,165
South Australia(*b*) ..	47,368	80,016	1.69	1,560,312	32.94	1,598,310
Western Australia ..	40,702	71,968	1.77	1,403,376	34.48	1,479,047
Tasmania ..	20,844	40,915	1.96	797,842	38.28	821,630
Total—1946–47 ..	559,730	986,814	1.76	19,242,873	34.38	19,862,933
1945–46 ..	533,819	945,542	1.77	18,438,069	34.54	18,019,178
1944–45 ..	518,293	920,427	1.78	17,948,326	34.63	12,036,249
1943–44 ..	503,140	903,577	1.80	11,746,501	23.35	12,256,976
1942–43 ..	491,121	891,221	1.82	11,585,873	23.59	11,659,626

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

In addition to the children endowed in families, child endowment benefits were paid in respect of children in approved institutions during 1942–43 to 1946–47 as follows: 1942–43, 16,938; 1943–44, 18,396; 1944–45, 18,116; 1945–46, 18,989; and in 1946–47, 19,743.

In 1946–47 the cost of administration was £150,884 or 0.76 per cent. of the total payments made compared with £134,130 or 0.74 per cent. in 1945–46.

3. **Number of Children.**—The following table shows the number of claims in force, the number of endowed children and the number of unendowed children in endowed families, classified according to the number of children in the family:—

CHILD ENDOWMENT: NUMBER OF CHILDREN(*a*) AT 30th JUNE, 1947.

Size of Family.	Claims of Endowed Families in force at 30th June, 1947.	Children.		
		Endowed.	Unendowed in Endowed Families.	Total in Endowed Families
Two children ..	311,408	311,408	311,408	622,816
Three ,, ..	144,379	288,758	144,379	433,137
Four ,, ..	60,163	180,489	60,163	240,652
Five ,, ..	24,991	99,964	24,991	124,955
Six ,, ..	11,082	55,410	11,082	66,492
Seven ,, ..	4,663	27,978	4,663	32,641
Eight ,, ..	1,994	13,958	1,994	15,952
Nine ,, ..	713	5,704	713	6,417
Ten ,, ..	253	2,277	253	2,530
Eleven ,, ..	63	630	63	693
Twelve ,, ..	15	165	15	180
Thirteen ,, ..	5	60	5	65
Fourteen ,, ..	1	13	1	14
Total 1946–47 ..	559,730	986,814	559,730	1,546,544
1945–46 ..	533,819	945,542	533,819	1,479,361
1944–45 ..	518,293	920,427	518,293	1,438,720
1943–44 ..	503,140	903,577	503,140	1,406,717
1942–43 ..	491,121	891,221	491,121	1,382,342

(*a*) Under 16 years of age.

§ 3. Commonwealth Widows' Pensions.

The Widows' Pensions Act which operated from 1st July, 1942 is now incorporated in the Social Services Consolidation Act 1947 and from 8th July, 1947 provision has been made for the following classes of widows (*a*) and the rate payable in each class:—

Class "A" is a widow (not being a widow specified in Class "D") who has the custody, care and control of one or more children under 16 years of age.

Rate £110 per annum.

Class "B" is a widow who is not less than 50 years of age, without dependent children.

Rate £83 4s. per annum.

Class "C" is a widow who at the time of the death of husband or within 26 weeks after is less than 50 years of age, without dependent children, and is in necessitous circumstances.

Rate £1 17s. 6d. per week for not more than 26 weeks.

Class "D" is a widow (*a*) whose husband has been imprisoned for more than 6 months and who has the custody, control and care of one or more children under 16 years, or is not less than 50 years of age.

Rate £83 4s. per annum.

A widow may not receive a widows' pension if she is receiving an age or invalid pension.

(*a*) See par. 3, following page.

The value of property in respect of a Class "A" widow after deductions of charges or encumbrances thereon, but excluding the value of house owned and resided in, together with furniture and personal effects, etc., as shown in § 1 (i) on page 297, shall not exceed £1,000; and in the case of a Class "B" or a Class "D" widow the amount is £650.

The annual rate at which a pension is determined shall be reduced: (*a*) by the amount (if any) by which the widow's income apart from the pension exceeds £52 per annum; (*b*) in the case of a Class "B" or a Class "D" widow by £1 for every complete £10 of property between £50 and £400 and by £1 for every complete £7 between £401 to £650.

The term "widow" includes a dependent female (i.e., a woman, who for not less than three years immediately prior to the death of a man was wholly or mainly maintained by him, though not legally married to him, lived with him as his wife on a permanent and *bona fide* domestic basis); a deserted wife; a woman whose marriage has been dissolved and who has not remarried; a woman whose husband is an inmate of a hospital for the insane; and a woman whose husband is imprisoned for not less than six months.

The first payment under the Act was made on 27th July, 1942. The number of pensions current at 30th June, 1947 was 42,742 and the amount paid during 1946–47 was £3,366,288. The following table shows details of widows' pensions paid in each State in the year 1946–47, and for Australia for the years 1945–46, 1944–45, 1943–44 and 1942–43 :—

WIDOWS' PENSIONS AT 30th JUNE, 1947.(*a*)

State.	Pensions Current.(*b*)		Children for whom Pensions Payable.	Average Four-weekly rate of Pension. (*c*)	Amount paid in Pensions during 1946–47.	
	Number.	Per 10,000 of Population.			Amount.	Per head of Population.(*d*)
			No.	£ s. d.	£	s. d.
New South Wales (*e*)	16,572	55	7,456	6 1 0	1,355,302	9 1
Victoria	12,311	60	3,732	5 14 2	941,734	9 3
Queensland ..	6,137	55	2,663	6 0 5	469,723	8 7
South Australia(*f*) ..	3,718	57	1,185	5 14 2	288,201	8 10
Western Australia ..	2,570	51	1,012	5 18 7	195,261	7 10
Tasmania	1,434	56	654	5 18 0	116,067	9 1
Total 1946–47 ..	42,742	56	16,702	5 18 1	3,366,288	8 11
1945–46 ..	44,587	60	15,707	5 14 0	3,247,333	8 9
1944–45 ..	44,155	60	15,284	5 6 1	2,965,446	8 1
1943–44 ..	42,212	58	16,107	5 6 8	2,800,702	7 8
1942–43 ..	38,402	53	16,214	5 5 0	2,358,998	6 7

(*a*) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942 (*b*) Excludes thirteen (1946–47), ten (1945–46), nine (1944–45), eight (1943–44) and six (1942–43) pensions in respect of pensioners in Benevolent Asylums. (*c*) Payments were four-weekly up to the 24th June, 1947 pay, but are now fortnightly. (*d*) Based on mean population for the financial year. (*e*) Includes Australian Capital Territory. (*f*) Includes Northern Territory.

§ 4. Commonwealth Maternity Allowances.

1. **General.**—Part V. of the Social Services Consolidation Act 1947 (previously the Maternity Allowance Act 1912–1944) makes provision for the payment of maternity allowances. The most important conditions in the original Act were that the sum of five pounds was payable in the case of each confinement resulting in the birth of a viable child whether such child was born alive or dead. The mother must be a native of Australia or intend to settle permanently therein. No payment is made to aliens. The

Act was amended in May, 1942, to provide for the allowance to be paid to aboriginal natives of Australia, subject to certain conditions. The Financial Emergency Act 1931 reduced the allowance payable to £4 and limited the application of the original Act to those cases where the combined income of husband and wife did not exceed £260 (reduced to £208 by the Financial Emergency Act 1932) in the previous 12 months. There were further subsequent changes and at 30th June, 1943, the income limit was £247, with an additional £13 in respect of each previous living child under 14, the maximum being £338. The amount of the allowance was £4 10s. where there was no previous living child under 14 years of age, £5 where there were one or two previous living children under 14 and £7 10s. where there were three or more such children.

By an amendment to the Act in March, 1943, the income limit provisions were repealed and the allowances payable in respect of births from 1st July, 1943, were :— Where there are no other children under 14 years of age, £5 ; where there are one or two children under 14, £6 ; and where there are three or more children under 14, £7 10s. ; together with the payment of £1 5s. for each of the four weeks before and after the birth of a child. By a further amendment, which operated from 5th April, 1944, the ages of children taken into account has been increased from 14 to 16 years of age, and the payment of £1 5s. per week was increased to £1 17s. 6d. per week when twins are born and to £2 10s. per week when triplets are born at one birth.

From 3rd July, 1947 the allowances payable were as follows :—

(i) Where there are no other children under 16 years, £15 ;
(ii) Where there are one or two other children under 16 years, £16 ;
(iii) Where there are three or more children under 16 years £17 10s. Where more than one child is born at a birth the allowance is increased by £5 in respect of each additional child born at that birth.

The following table gives details of the maternity allowance claims paid and rejected since the inception and for the five years 1938–39 and 1943–44 to 1946–47 :—

MATERNITY ALLOWANCES : SUMMARY.

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration (approximate).	Cost per £100 allowance paid (approximate).
	No.	No.	£	£	£ s. d.
1938–39 ..	80,916	6,272	436,614	16,659	3 17 8
1943–44 (*a*) ..	149,067	3,564	2,287,000	18,000	0 15 9
1944–45 ..	159,621	667	2,542,801	19,000	0 14 11
1945–46 ..	156,446	718	2,492,495	18,000	0 14 5
1946–47 ..	191,994	636	3,026,459	23,000	0 15 2
Aggregate— 1912–13 to 1946–47 ..	4,045,061	110,038	27,063,700	504,455	1 17 3

(*a*) Income qualifications was abolished from 1st July, 1943.

2. **Claims paid in each State.**—The following table shows the number of maternity allowance claims paid in each State during the same five years :—

MATERNITY ALLOWANCES : CLAIMS PAID IN EACH STATE.

Year ended 30th June—	N.S.W. (*a*)	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1939	30,860	20,819	12,880	7,162	5,213	3,940	42	80,916
1944	57,792	38,653	23,743	12,636	10,439	5,804	(*b*)	149,067
1945	61,755	40,582	26,432	14,361	10,909	5,582	(*b*)	159,621
1946	60,730	40,991	25,281	13,736	9,912	5,796	(*b*)	156,446
1947	73,110	50,730	29,002	17,860	13,750	7,542	(*b*)	191,994
Total, 1912–13 to 1946–47 ..	1,594,536	1,052,044	611,845	353,274	260,735	171,503	1,124	4,045,061

(*a*) Includes Australian Capital Territory. (*b*) Included with South Australia.

3. **Claims Paid at the Various Rates.**—The following table shows the number of claims granted in each State at the various rates in respect of maternity allowances chargeable to the National Welfare Fund during the year 1946–47. The total for Australia for the year 1945–46 is also shown :—

MATERNITY ALLOWANCES : CLAIMS PAID IN EACH STATE, 1946–47.

State.	Single Births.			Multiple Births.						Total number of claims granted.
				Twins.			Triplets.			
	£15.	£16.	£17 10s.	£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N.S. Wales(*a*) ..	29,254	32,146	10,859	279	412	155	..	4	1	73,110
Victoria ..	20,983	22,573	6,511	237	313	103	1	6	3	50,730
Queensland ..	10,549	12,805	5,321	91	148	86	..	1	1	29,002
Sth. Australia (*b*)	7,364	8,061	2,239	83	79	33	1	..	..	17,860
Western Australia	5,104	6,434	2,066	42	72	29	3	..	..	13,750
Tasmania ..	2,825	3,148	1,470	26	50	21	..	1	1	7,542
Total 1946–47	76,079	85,167	28,466	758	1,074	427	5	12	6	191,994
1945–46	57,853	70,739	26,001	565	850	409	5	14	10	156,446

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

§ 5. Commonwealth Unemployment and Sickness Benefits.

1. **General.**—A very important addition was made to Commonwealth social legislation when the Unemployment and Sickness Benefits Act received assent on 5th April, 1944 The Act came into operation on 1st July, 1945, and is financed from the National Welfare Fund. The provisions are now incorporated in the Social Services Consolidation Act 1947. The first payments were made on 19th July, 1945.

Persons eligible include all males between the ages of 16 and 65 years and all females between the ages of 16 and 60 years who have lived in Australia for the twelve months immediately preceding a claim for benefit and who are not qualified to receive a service pension under the Soldiers' Repatriation Act or an age, invalid or widows' pension.

The payment of unemployment benefit is subject to the claimant being capable of undertaking and willing to accept suitable employment. The payment of sickness benefit is subject to the production of a medical certificate or some other satisfactory evidence, except where the applicant lives in remote or inaccessible areas of Australia or where for some good reason it is impossible to produce it.

2. **Maximum Rates of Benefits and Income.**—The maximum weekly rates of benefits for both unemployment and sickness and allowed income are as follows :—

Age and Conjugal Condition.	Maximum Weekly Benefit.								Allowed Weekly Income.	
	Claimant.		Dependent Spouse.		Child.		Total.			
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Unmarried—										
16 years and under 17 years	15	0	..		..		15	0	5	0
17 „ „ „ 18 „	15	0	..		..		15	0	10	0
18 „ „ „ 21 „	20	0	..		..		20	0	15	0
21 years and over	25	0	..		..		25	0	20	0
Married	25	0	20	0	5	0	50	0	20	0

Where an unmarried claimant has the custody, care and control of a child under the age of sixteen years, the total income may be increased by 5s. per week.

3. **Means Test.**—All benefits are subject to a means test which disregards the value of property owned by a claimant. In applying the means test for sickness benefits, any amount up to 20s. per week received by a claimant from a friendly society or other

approved benefit society is disregarded. For the purpose of calculating unemployment benefit, the income of the family group is taken into account, but in the case of sickness benefit the claimant's income only will be considered in determining whether there shall be reduction in benefit because of the possession of other income.

Where a person is entitled to some other payment such as war pension or worker's compensation in respect of the disability for which he claims sickness benefit, payment will be made only to the extent to which such other payment is less than the amount of benefit.

In the case of unemployment the Act provides for payment of benefit for the duration of the unemployment. and in the case of sickness for the duration of temporary incapacity. Where incapacity through sickness becomes permanent, an invalid pension may be granted, subject to the conditions governing the grant of invalid pensions.

4. **Waiting Period.**—There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable.

5. **Special Benefit.**—A separate class of benefit known as a special benefit is also provided which gives assistance to persons on account of special circumstances or in cases of hardship where a person is not qualified for either sickness or unemployment benefit by reason of his inability to comply with one or other of the statutory requirements, at a rate not exceeding that which might otherwise have been payable.

6. **Administration.**—The Department of Social Services, following a policy of decentralization in order to bring the department into closer touch with the people whom it is intended to serve, has established regional offices in most States to deal with claims for all classes of social service benefits within each region. Pending the opening of additional regional offices, however, and as a matter of administrative convenience, certain Commonwealth Employment Officers will act as Registrars of Social Services, whilst others will act as agents for the regional offices. Payment of unemployment and sickness benefits is made by means of cheques, issued by the Director of Social Services in the metropolitan areas and by Regional Registrars in the country districts.

7. **Statistics, 1945–46 and 1946–47.**—(i) *General.* The following tables give details of the operations for the years 1945–46 and 1946–47. Attention is directed to the differences shown in the tables. In tables in paras. (ii) and (iii) late advices of benefits granted or discontinued have been allocated to their correct year of occurrence, but in tables in (v) and (vi) it has not been practicable to allocate 1945–46 advices received after the completion of the tables for that year, therefore they have been included in the 1946–47 figures.

(ii) *Claims admitted, Exits, Persons on Benefit.* At 30th June, 1946, 13,989 persons were in receipt of benefit, comprising 6,873 unemployment, 6,920 sickness and 196 special benefits. During the year 1946–47, 136,210 claims were admitted (78,578 unemployment, 56,026 sickness and 1,606 special), whilst 134,052 benefits were discontinued (79,243 unemployment, 53,463 sickness and 1,346 special), leaving 16,147 benefits in force at 28th June, 1947 (6,208 unemployment, 9,483 sickness and 456 special).

The total number of benefits granted and discontinued during the year 1946–47 and persons on benefit at the beginning and end of that year, in each class of benefit, is shown in the following table :—

CLAIMS ADMITTED, DISCONTINUANCES AND PERSONS ON BENEFIT, 1946–47 : AUSTRALIA.

Class of Benefit.	On Benefit at 30th June, 1946.		Claims admitted during 1946–47.		Discontinuances during 1946–47.		On Benefit at 28th June, 1947.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Unemployment ..	6,576	297	73,379	5,199	73,974	5,269	5,981	227
Sickness ..	5,628	1,292	45,024	11,002	43,388	10,075	7,264	2,219
Special ..	56	140	1,271	335	1,136	210	191	265
Total ..	12,260	1,729	119,674	16,536	118,498	15,554	13,436	2,711

(iii) *Number of Persons admitted in each State.* The following table shows the number of persons in each State admitted to benefit during the years 1945–46 and 1946–47:—

PERSONS ADMITTED TO BENEFIT.

State.	Unemployment.		Sickness.		Special.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
	1945–46.								
New South Wales*a*	38,592	10,197	11,822	2,435	87	61	50,501	12,693	63,194
Victoria ..	2,632	63	8,246	1,923	21	45	10,899	2,031	12,930
Queensland ..	10,574	380	5,043	825	49	27	15,666	1,232	16,898
South Australia(*b*)	9,470	1,486	3,674	604	54	10	13,198	2,100	15,298
Western Australia	3,879	158	2,848	657	24	16	6,751	831	7,582
Tasmania ..	308	5	1,545	280	7	41	1,860	326	2,186
Total ..	65,455	12,289	33,178	6,724	242	200	98,875	19,213	118,088
	1946–47.								
New South Wales*a*	12,297	407	15,798	3,725	336	72	28,431	4,204	32,635
Victoria ..	15,645	542	10,967	3,242	388	105	27,000	3,889	30,889
Queensland ..	32,556	3,366	6,735	1,445	313	65	39,604	4,876	44,480
South Australia(*b*)	1,368	12	5,015	961	67	30	6,450	1,003	7,453
Western Australia	11,113	868	4,459	1,219	139	48	15,711	2,135	17,846
Tasmania ..	400	4	2,050	410	28	15	2,478	429	2,907
Total ..	73,379	5,199	45,024	11,002	1,271	335	119,674	16,536	136,210

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(iv) *Benefits Paid.* The following table shows the benefits paid in respect of each class of benefit in each State during each of the years 1945–46 and 1946–47:—

BENEFITS PAID.

State.	Unemployment.		Sickness.		Special.		Total.	
	1945–46.	1946–47.	1945–46.	1946–47.	1945–46.	1946–47.	1945–46.	1946–47
	£	£	£	£	£	£	£	£
New South Wales(*a*)	275,205	172,141	198,943	258,782	1,068	6,772	475,216	437,695
Victoria.. ..	28,234	159,060	139,267	182,184	912	6,839	168,413	348,083
Queensland ..	108,138	441,048	76,306	106,631	624	7,826	185,068	555,505
South Australia(*b*)	73,226	20,064	53,076	74,471	207	1,709	126,509	96,304
Western Australia	36,440	110,700	34,817	56,050	654	2,918	71,911	169,668
Tasmania ..	3,827	7,809	23,459	33,246	809	1,815	28,095	42,870
Total ..	525,070	910,822	525,868	711,364	4,274	27,939	1,055,212	1,650,125

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(v) *Unemployment Benefits.* (*a*) *Cause of Unemployment.* The following table analyses the reasons for termination of employment in each State as stated by persons whose admission to benefit was notified during the year 1946–47.

Discharges and lay-offs are separations on the initiative of the employers, quits on that of the employee.

CAUSE OF UNEMPLOYMENT: CLAIMS ADMITTED, 1946–47.

Cause of Unemployment.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
Discharged or laid-off due to—							
Inefficiency	617	356	911	102	422	44	2,452
Retrenchment	1,651	600	4,053	171	870	46	7,391
Replacement by re-instated ex-service personnel, etc. ..	689	409	946	74	488	27	2,633
Power rationing	225	158	7,751	11	3,325	..	11,470
Shortage of materials	562	900	1,703	124	492	16	3,797
Strikes, lock-outs within the same establishment	3,069	10,889	242	288	2,427	1	16,916
Seasonal work	834	297	8,275	50	230	33	9,719
Casual work	1,632	890	5,301	229	1,104	69	9,225
Other reasons	391	238	1,798	50	430	16	2,923
Quitted due to—							
Medical unfitness, work too heavy	1,463	835	2,022	209	1,098	72	5,699
Other reasons..	910	491	1,761	83	684	32	3,961
Not previously employed—							
Employers, workers on own account	293	86	676	15	269	18	1,357
Ex-service personnel not yet returned to work	484	110	1,676	22	496	31	2,819
Other	53	13	38	3	16	3	126
Total	12,873	16,272	37,153	1,431	12,351	408	80,488

(a) Includes Australian Capital Territory. (b) Includes Northern Territory.

(b) *Industrial Groups.* The following table shows the distribution, according to main industrial groups in each State, of persons whose admission to benefit was notified during the year 1946–47.

UNEMPLOYMENT—INDUSTRIAL GROUPS: CLAIMS ADMITTED, 1946–47.

Industry in which last engaged.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust	Tas.	Aust.
Agriculture, Pastoral and Dairying	1,600	480	5,866	72	451	31	8,500
Other Primary Production ..	242	82	583	7	126	8	1,048
Coal Mining	865	6	102	1	428	..	1,402
Other Mining and Quarrying ..	102	83	223	12	460	12	892
Factories and Industrial—							
Founding, engineering, metal-working including shipbuilding	3,275	9,264	2,406	411	1,155	16	16,527
Vehicles, including aircraft ..	163	798	1,536	81	740	4	3,322
Textiles and articles of dress ..	226	287	2,316	24	722	22	3,597
Food, drink and tobacco ..	785	761	6,928	107	673	41	9,295
Furniture, woodwork, etc. ..	195	118	1,318	23	615	11	2,280
Other factories, including heat, light and power	619	1,076	1,425	88	1,060	29	4,297
Building and Construction ..	1,140	721	3,814	96	847	45	6,663
Transport and Communication ..	641	1,227	2,801	183	2,053	57	6,962
Commerce and Finance—							
Wholesale and retail trade ..	950	612	2,578	148	1,123	41	5,452
Finance and property	78	46	108	15	48	1	296
Public Administration and Professional	680	253	1,759	53	517	35	3,297
Personal and Domestic Service ..	809	340	1,741	90	877	32	3,889
Other	503	118	1,649	20	456	23	2,769
Total	12,873	16,272	37,153	1,431	12,351	408	80,488

(a) Includes Australian Capital Territory. (b) Includes Northern Territory.

(vi) *Sickness Benefits.* (*a*) *Nature of Sickness.* The following table shows the number of admissions to sickness benefit (46,228 males and 11,255 females, Australia) during 1946–47 according to State and the main natures of sickness.

NATURE OF SICKNESS : CLAIMS ADMITTED, 1946–47.

Nature of Sickness.	N.S.W. (*a*)	Vic.	Q'land.	S. Aust. (*b*)	W. Aust	Tas.	Aust.
Infective and Parasitic Diseases ..	1,039	891	599	363	394	155	3,441
Cancer	111	89	107	55	28	6	396
Other tumours	224	183	95	65	53	20	640
Rheumatism, Diseases of Nutrition and Vitamin-deficiency Diseases..	1,259	878	511	421	296	206	3,571
Diseases of—							
Blood and blood-forming organs	192	125	75	47	34	12	485
Nervous system and sense organs	1,968	1,316	859	620	465	247	5,475
Circulatory system	1,556	1,171	628	455	332	182	4,324
Respiratory system	2,147	1,628	760	767	640	239	6,181
Digestive system	4,498	3,059	1,794	1,300	1,303	450	12,404
Genito-urinary system ..	996	602	523	327	260	113	2,821
Pregnancy, Childbirth, etc. ..	194	440	104	15	137	16	906
Skin and cellular tissue ..	1,240	715	577	357	416	178	3,483
Bones and organs of movement..	487	354	235	190	168	73	1,507
Other Diseases (including ill-defined conditions)	263	282	180	140	119	71	1,055
Injuries and Acute Poisoning—							
Fractures	1,759	1,378	815	480	509	203	5,144
Other injuries, etc.	1,566	1,222	772	535	567	261	4,923
Operations (original disability not stated)	152	150	48	45	57	31	483
Other (including not stated) ..	56	67	43	21	38	19	244
Total	19,707	14,550	8,725	6,203	5,816	2,482	57,483

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(*b*) *Industrial Groups.* The following table shows the distribution according to main industrial groups of persons whose admission to benefit was notified during the year 1946–47.

SICKNESS—INDUSTRIAL GROUPS : CLAIMS ADMITTED, 1946–47.

Industry in which last engaged.	N S.W. (*a*)	Vic.	Q'land.	S. Aust. (*b*)	W. Aust.	Tas.	Aust.
Agriculture, Pastoral and Dairying	918	832	938	340	423	249	3,700
Other Primary Production ..	259	284	155	97	164	100	1,059
Coal Mining	1,264	105	211	1	141	13	1,735
Other Mining and Quarrying ..	78	83	123	41	414	190	929
Factories and Industrial—							
Founding, engineering, metal-working including shipbuilding	4,254	1,784	578	1,130	274	136	8,156
Vehicles, including aircraft ..	475	731	272	662	232	57	2,429
Textiles and articles of dress ..	1,352	1,808	331	246	225	233	4,195
Food, drink and tobacco ..	1,262	1,015	893	387	241	129	3,927
Furniture, woodwork, etc. ..	567	431	438	145	278	126	1,985
Other factories, including heat, light and power	1,932	1,585	435	509	375	183	5,019
Building and Construction ..	1,670	1,296	1,152	575	704	295	5,692
Transport and Communication ..	1,234	1,079	793	620	562	255	4,543
Commerce and Finance—							
Wholesale and retail trade ..	1,881	1,380	896	674	713	175	5,719
Finance and property	108	98	55	34	34	12	341
Public Administration and Professional	967	815	557	302	345	120	3,106
Personal and Domestic Service ..	1,416	1,156	843	425	649	198	4,687
Other	70	68	55	15	42	11	261
Total	19,707	14,550	8,725	6,203	5,816	2,482	57,483

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

§ 6. Hospitals Benefits Act.

Under this Act, which was assented to on 11th October, 1945, the Commonwealth Government has entered into agreements with the States to pay to the States the benefit rate of six shillings per day for each bed occupied by a qualified person in a public ward in a public hospital, provided that the States abolish the means test for admission into public wards and cease charging fees to qualified persons admitted thereto. For dates of operation, and payments made, in the several States, *see* Part B, §1, para. 5, *ante*.

The allowance of six shillings per day provided by the Commonwealth is given with the object of reimbursing the States the amount of money they lose because of the abolition of fees in public wards and for the loss of any charitable donations. The Commonwealth Government has undertaken to increase the amount if it is inadequate to meet these losses.

The agreement provides for the Commonwealth to pay a similar benefit towards the cost of treatment of qualified persons occupying beds in non-public wards in public hospitals, and for the State Government to reduce the hospital fees by the equivalent of the benefit rate, thus relieving qualified persons of fees to this extent.

Private hospitals are entitled to claim six shillings a day for each bed occupied by a qualified patient. These hospitals must be approved by a joint committee of Commonwealth and State health authorities before payment of benefit is made. The hospitals are required to reduce each qualified patient's account by the amount of the benefit received from the Commonwealth.

The Commonwealth and States have agreed to form a National Hospital Council of Commonwealth and State representatives, the functions of which will be to advise the Commonwealth and State Governments on any hospital matters referred to it by the Commonwealth or State Governments.

§ 7. Tuberculosis Act.

This Act was assented to on 11th October, 1945, and an amending Act on 15th August, 1946. The following four principles are embodied :—

(*a*) The earlier the disease is recognized the better the prospect of recovery for the patient and the better from the point of view of the community. Accordingly, the Commonwealth proposal is aimed at encouraging the States to establish additional diagnostic facilities. Section 4 of the Act provides for the Commonwealth to subsidize £ for £ the expenditure of the States in the maintenance of diagnostic facilities, such as clinics, dispensaries, X-ray equipment, etc. The Commonwealth is to provide up to a maximum of £50,000 per year on this basis.

(*b*) The Commonwealth will pay to the States a subsidy of six shillings a day per bed occupied in tuberculosis hospitals. Payment is subject to the condition that free treatment is given and no fees are charged in public wards.

(*c*) Many patients, after a period in a hospital or sanatorium, require further care. To assist the States to extend after-care facilities, the Commonwealth proposes to make available up to £50,000 per annum, on a £ for £ basis, for maintenance expenditure on after-care facilities established after the commencement of the Act.

(*d*) Medical authorities are agreed that an adequate level of nutrition should be maintained as a first line of resistance to tuberculosis. To this end, the Government provides special allowances for sufferers from tuberculosis or their dependants with the objects of :—

(i) encouraging such sufferers to refrain from working and to take treatment ;

(ii) minimizing the spread of tuberculosis ; and

(iii) promoting the better treatment of tuberculosis.

This allowance will be paid only in those cases where the fight against the disease will be positively assisted. It is not an automatic grant to all cases of tuberculosis.

§ 8. Pharmaceutical Benefits Act.

A Pharmaceutical Benefits Act passed all stages of the Commonwealth Parliament in March, 1944 and was amended in September, 1945. This Act was the subject of a High Court action, as a result of which the Government sought by means of a referendum of the people the constitutional power necessary to implement the Act. For further information on legal and constitutional action in this matter, see Chapter III.—General Government, pages 64 and 65. This power having been granted, a further Pharmaceutical Benefits Act, which repealed the Acts of 1944 and 1945, was assented to on 12th June, 1947. This Act embodies a scheme for providing pharmaceutical benefits to all persons ordinarily resident in Australia. The benefits to be provided are contained in a Commonwealth Pharmaceutical Formulary, which is subject to periodic revision by a Formulary Committee comprised of members of the medical and pharmaceutical professions. Benefits are supplied without cost to the person receiving the benefit, payment being made by the Commonwealth to authorized suppliers from the National Welfare Fund. Special arrangements exist for supplying benefits or their equivalent to persons residing in isolated areas. These pharmaceutical benefits were first made available to the public on 1st June, 1948.

CHAPTER IX.

PUBLIC HYGIENE.

§ 1. Public Health Legislation and Administration.

Reference to the various public health authorities, Commonwealth and State, their functions, and the legislation administered, may be found in earlier issues of the Official Year Book (see No. 22, pp. 493–5).

§ 2. The National Health and Medical Research Council.

In 1926 the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. In 1936, the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions :—

To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research ;

To advise the Commonwealth Government as to the expenditure of money specifically appropriated as money to be spent on the advice of this Council ;

To advise the Commonwealth Government as to the expenditure of money upon medical research and as to projects of medical research generally ;

To advise Commonwealth and State Governments upon the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition.

The Council consists of the Commonwealth Director-General of Health (as Chairman), two officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937 ; the twentieth session met at Canberra in November, 1945.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—

(*a*) to Departments of the Commonwealth or of a State engaged in medical research ;

(*b*) to Universities for the purpose of medical research ;

(*c*) to institutions and persons engaged in medical research ;

(*d*) in the training of persons in medical research.

Approved research institutions under this system now number 44. During the year 1945 grants numbered 28 in the following fields :—bacteriology, biochemistry, chemotherapy, dentistry, medical survey, obstetrics, ophthalmology, pathology physiology and pharmacology, and virus diseases. In certain instances, equipment and apparatus have been made available by the Council ; this has greatly facilitated some specialized lines of research.

The work that is being done under these grants is already yielding results : beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia. During recent years, researches very largely were directed to problems associated with the war.

§ 3. The Commonwealth Department of Health.

1. **General.**—An Order-in-Council dated 3rd March, 1921, defined various functions to be performed by the Commonwealth Department of Health in addition to quarantine, which is the only specific public health power of the Commonwealth Parliament under the Commonwealth Constitution. Many essential services have been developed by the Department to meet current needs and to further public health throughout Australia. In earlier issues of the Official Year Book reference has been made to several features of this development, including : The Royal Commission on National Health, 1925 (see No. 22, pp. 509–10), the International Pacific Health Conferences (see No. 22, p. 510 and No. 29, p. 334), Industrial Hygiene (see No. 18, pp. 522–55), Tropical Hygiene (see No. 22, pp. 506–7, No. 25, pp. 415–7, and No. 32, p. 226), and the Commonwealth Advisory Council on Nutrition (see No. 32, pp. 222–3). Reference to quarantine is made below (see § 4, par. 2).

2. **The Commonwealth Serum Laboratories.**—The establishment for the preparation of Jennerian vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Depot" was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories" and is administered by the Commonwealth Department of Health. The laboratories are now installed in fully equipped buildings and a large staff is employed. At Broadmeadows a farm of 254 acres has been developed, under veterinary supervision, for the many thousands of animals required for the work of the laboratories.

The list of biological preparations produced by the laboratories has been extended until at the present time almost the whole range of these products is manufactured and Australia is practically independent of other countries in thus producing its own requirements. War needs greatly increased all activities. Penicillin is being produced in quantities sufficient for ordinary commercial purposes. Constant research is being conducted into every relevant aspect of bacteriology and immunology and new sera and prophylactic agents are being tested as the growth of medical knowledge opens up new avenues of treatment, prevention and diagnosis. Other original and applied research relating to all aspects of public health is maintained. The laboratories serve as the national centre for the maintenance in Australia of the international standards of the Permanent Commission on Biological Standards (World Health Organization Interim Commission). For the past 22 years the production of veterinary biological products has been a feature of the work of the laboratories. In recent years an extensive development has occurred in this direction and the products are being used in greatly increased amounts in all States for the prevention or treatment of diseases in domestic animals and stock.

3. **The Commonwealth Health Laboratories.**—The twelve health laboratories of the Department are situated at strategic points throughout Australia. They are located at Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Lismore, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie and Broome. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of Weil's disease and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital services ; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers hitherto unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the Sydney School of Public Health and Tropical Medicine.

A major part of the work performed at the Kalgoorlie laboratory. since its establishment in 1925, has been the medical examination, on behalf of the State Department of Mines, of employees and applicants for employment in the metalliferous mines in Western Australia. These examinations are performed in accordance with the provisions of the State Mines Regulation Act and the Mine Workers' Relief Act, the objects of which are to provide a healthy body of men for the industry and to free the industry of, and protect the future of, those found to be suffering from serious pulmonary disease. The examinations include clinical, laboratory and radiographic investigation. By means of a mobile X-ray unit an annual tour is also made of outlying mining centres.

X-ray facilities are also provided at the Bendigo laboratory, as part of the campaign against tuberculosis, for the examination of miners and other radiographic work in the district.

4. **The School of Public Health and Tropical Medicine.**—The Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and tropical hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, and lay officers and nurses in the tropical services and missionaries. In addition to this work, throughout the war all the resources of the School were made available for the training of medical and hygiene officers and other ranks from all the Services of the Australian and Allied Forces.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru. Further details may be found in previous issues of the Official Year Book (see No. 29, p. 334).

5. **The Australian Institute of Anatomy.**—Information concerning the Australian Institute of Anatomy at Canberra is given in previous issues of the Official Year Book (see No. 32, p. 919-21). In 1931 the Institute became an integral part of the Commonwealth Department of Health. The work of the Institute on general problems of comparative anatomy has now been concentrated on aspects of structure and function with special reference to the development of the growing child. Biochemical and biological research in this field is being developed in close association with the model kindergarten centres established by the Department in each capital city (see par. 8 below). Work in specialized aspects of nutrition has steadily increased. The Institute now plays an important part in research and the scientific application of nutritional knowledge under Australian conditions. The background of comparative anatomy and the museums of the Institute are maintained as part of the general plan of work, and an expert zoologist is a member of the body of research workers at the Institute. See also Chapter XXVIII. "Miscellaneous".

6. **The Northern Territory Medical Service.**—As from 1st April, 1939, the Commonwealth Department of Health assumed administrative responsibility for the medical and health services of the Northern Territory, absorbing the Northern Territory Medical Service. With the growing importance of Darwin as the northern gateway to Australia and as an administrative and service centre its health services were strengthened, a new hospital at Darwin was built and the hospital at Alice Springs was enlarged.

With civilian evacuation during the Pacific war, military control of the medical services operated in the years 1942 to 1945. Civilian control was resumed by the Department during the period November, 1945 to May, 1946, starting at Alice Springs and gradually extending north to Darwin. The hospitals at Alice Springs, Tennant Creek, Katherine and Darwin, and the Health Laboratory at Darwin were re-established as civilian institutions.

An aerial medical service, operated by the Department, is based on Darwin, and comprises two Dragon aircraft and a pilot. The Flying Doctor Service of Australia has a base at Alice Springs, and the medical officers at the hospital act as the doctors for this service.

7. **National Fitness.**—Health authorities in Australia have closely followed the world-wide movement for the advancement of physical fitness and in several States active work has been proceeding over some years. In 1938, following a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and local government authorities in the movement. Meetings of this Council are held at regular intervals, at least annually. Meanwhile active State Councils have been formed in all States. As a result of the recommendations of the central Council, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In July, 1941, a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942, the Commonwealth Grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1946 the total grants were extended for a further period of five years. The movement continues to develop and to gain public interest and support throughout Australia.

8. **The Pre-school Child.**—Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the care of the infant and the welfare of the school child are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field it has secured the co-operation of the Federal Organization of Kindergarten Unions which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under the direction of the local Kindergarten Union and the employment of staff was made with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children available at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is carried on on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

9. **Organization for the Control of Cancer.**—The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Since 1928 the Australian Cancer Conferences, convened by the Department, have provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and the determination of lines of action and further development. The tenth conference in this series met in New Zealand in February, 1939, and so marked an association which has been maintained between Australia and the Dominion since the inception of the conferences.

A large amount of radium purchased in 1928 by the Commonwealth Government for use in treatment and research has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the Department. Records of treatment and the results obtained are kept by all treatment centres on uniform lines and are collected and analysed. These records, in respect of certain parts of the body, are also collated in accordance with the international inquiry which was carried out under the auspices of the Cancer Commission of the Health Organization of the United Nations in collaboration with the International Radiological Association.

Close co-operation is maintained between research workers, physicists and biochemists and the medical men engaged in the clinical investigation and treatment of the disease, so that problems are mutually investigated and treatment is applied with the highest attainable degree of scientific accuracy.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health has now extended the work of the Commonwealth Radium Laboratory, which was established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, which is now known as the Commonwealth X-ray and Radium Laboratory, was established at the University of Melbourne by agreement with the Council of the University, and is maintained, controlled and staffed by the Commonwealth Department of Health. It is accommodated in a separate laboratory building of sixteen rooms specially designed for X-ray and radium work, and is well provided with all necessary equipment for research work, including a high-tension generator capable of supplying 500,000 volts to an X-ray tube. This laboratory is actively at work and its specialist officers co-operate closely with the local physical services which are being developed at the Universities in the other capital cities of Australia. The laboratory also continues its earlier work of production of radon for treatment, the repair of radium apparatus, and research into problems of treatment and protection. During the year 1945 a total quantity of 78,043 millicuries of radon was prepared and issued by this laboratory and the associated centres in Sydney, Adelaide and Brisbane, and in 1946 a total quantity of 83,077 millicuries was issued. Used in the treatment of cancer and for research purposes this production represents a continuing increase over the output of previous years.

10. **Veterinary Hygiene and Plant Quarantine.**—In 1927 Directors were appointed to control divisions of the Commonwealth Department of Health which have been created to deal with veterinary hygiene and plant quarantine.

§ 4. Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. **Quarantine.**—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows:—(i) Human quarantine which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease; (ii) Animal quarantine which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports, and (iii) Plant quarantine which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States: in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.

3. **Notifiable Diseases.**—(i) *General.* (*a*) *Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(*b*) *Details by States.* In earlier issues of the Official Year Book (see No. 22, p. 501) information was given concerning the notification, etc., of diseases under State headings.

(*c*) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and the Australian Capital Territory the diseases notifiable in 1945 and 1946 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY† AND NOTIFICATIONS FOR THE YEARS ENDED 31st DECEMBER, 1945 AND 1946.

Disease.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.†	Aust. Cap. Terr.	Aust.
				YEAR 1945.					
Anchylostomiasis	*	1	15	..	..	..	..	..	16
Anthrax	*	3	..	..	..	..	..	..	3
Beriberi	*	*	*	*	*	*	..	*	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	117	117	54	23	29	19	..	1	360
Cholera	..	..	..	..	..	..	..	..	..
Dengue	*	*	*	*	*	*	..	*	..
Diphtheria	1,478	899	499	210	425	403	..	2	3,916
Dysentery (Amoebic)	*	4	..	3	14	..	..	..	21
Dysentery (Bacillary)	*	12	26	27	..	..	..	..	65
Encephalitis Lethargica	3	..	3	1	1	1	..	1	10
Erysipelas	*	*	*	65	*	*	..	..	65
Filariasis	*	..	1	..	..	..	..	..	1
Helminthiasis	*	..	*	*	*	*	*	*	..
Hydatid	*	28	*	*	..	*	*	..	28
Influenza	*	*	*	1	*	*	..	*	1
Leprosy	3	..	5	..	31	..	..	..	39
Malaria(*a*)	*	621	396	12	1	..	..	..	1,030
Measles	*	*	*	740	*	*	..	6	746
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	668	238	299	9	5	4	..	3	1,226
Psittacosis	*	..	*	2	*	*	*	*	2
Puerperal Pyrexia	..	..	90	27	..	16	..	..	133
Puerperal Fever	151	21	10	..	3	7	..	..	192
Rubella	*	*	*	*	*	*	..	3	3
Scarlet Fever	6,977	2,710	605	788	99	260	..	53	11,492
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	*	10	38	*	*	*	*	*	48
Trachoma	*	..	*	*	*	*	*	*	..
Tuberculosis(*b*)	1,688	613	424	248	287	197	..	1	3,458
Typhoid Fever(*c*)	29	30	37	9	24	1	..	..	130
Typhus (Endemic)(*d*)	26	1	98	5	77	..	..	..	207
Undulant Fever	2	9	..	2	5	..	..	1	19
Weil's Disease(*e*)	*	*	6	*	*	*	*	*	6
Whooping Cough	*	*	*	1,883	*	*	..	1	1,884
Yellow Fever	..	..	..	..	..	..	..	..	..
				YEAR 1946.					
Anchylostomiasis	*	202	21	..	..	2	..	..	225
Anthrax	*	..	..	..	..	..	..	..	..
Beriberi	*	*	*	*	*	*	..	*	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis	89	86	36	14	37	23	..	1	286
Cholera	..	..	..	..	..	..	..	..	..
Dengue	*	*	*	*	*	*	..	*	..
Diphtheria	1,279	494	461	161	366	256	..	1	3,018
Dysentery (Amoebic)	*	22	1	28	6	1	..	..	58
Dysentery (Bacillary)	*	11	3	14	1	..	..	..	29
Encephalitis Lethargica	3	2	2	3	1	..	..	..	11
Erysipelas	*	*	*	67	*	*	..	..	67
Filariasis	*	..	1	..	..	..	..	..	1
Helminthiasis	*	..	*	*	*	*	*	*	..
Hydatid	*	19	*	*	*	*	*	..	19
Influenza	*	*	*	..	*	*	..	*	..
Leprosy	4	..	12	..	27	..	..	..	43
Malaria(*a*)	*	3,413	1,994	89	..	..	..	..	5,496
Measles	*	*	*	8,986	*	*	..	114	9,100
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	656	247	149	66	2	98	..	5	1,223
Psittacosis	*	..	*	..	*	*	*	*	..
Puerperal Pyrexia	..	..	133	36	..	5	..	..	174
Puerperal Fever	185	15	12	..	8	4	..	..	224
Rubella	*	*	*	*	28	*	..	3	31
Scarlet Fever	3,090	3,282	491	547	88	231	..	58	7,787
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	*	14	41	*	*	*	*	*	55
Trachoma	*	1	*	*	*	*	*	*	1
Tuberculosis(*b*)	1,671	687	398	241	412	219	..	6	3,634
Typhoid Fever(*c*)	25	34	11	4	18	2	..	..	94
Typhus (Endemic)(*d*)	43	1	75	6	70	..	..	..	195
Undulant Fever	..	16	1	..	6	..	..	..	23
Weil's Disease(*e*)	*	*	..	*	*	*	*	*	..
Whooping Cough	*	*	*	264	*	*	..	6	270
Yellow Fever	..	..	..	..	..	..	..	..	..

* Not notifiable. † Northern Territory statistics of civilian notifications are not available.

(*a*) Comprised mainly of relapses in Service cases infected overseas. (*b*) Includes all forms except in New South Wales, where only pulmonary tuberculosis is notifiable. (*c*) Includes Enteric Fever and Para-typhoid Fevers. (*d*) Cases reported are all of the mild type known as Brill's Disease or Endemic Typhus (including Scrub and Urban types). (*e*) Includes Leptospirosis, Weil's and Para-Weil's Disease.

(ii) *Venereal Diseases.* (*a*) *General.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State except South Australia, where the Venereal Diseases Act has not yet been proclaimed. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

For several years the Commonwealth Government granted a subsidy to each of the States to assist in providing hospital treatment and administrative control of venereal diseases, but this subsidy has been discontinued. Yearly subsidies have been paid to the States to assist in coping with the special conditions created by the large numbers of people in the Armed Forces during the Pacific war.

In 1927 a Division of Tuberculosis and Venereal Disease was established in the Commonwealth Department of Health, with a medical officer as Director. This Division ceased to exist in April, 1932.

(*b*) *Details by States.* A statement of the preventive provisions in each State, together with certain statistical data, appeared in earlier issues of the Official Year Book (see No. 22, pp. 503–4).

4. **Vaccination.**—(i) *Demand for Vaccination.* There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

(ii) *Details by States.* In earlier issues of the Official Year Book (see No. 22, pp. 504–5) information was given concerning the provisions regarding vaccination in each State.

§ 5. Inspection and Sale of Food and Drugs.

Legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all those goods which are sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion, and with respect also to the sale and custody of poisons, reference should be made to Official Year Book, No. 22, pp. 495–7.

§ 6. Supervision of Dairies, Milk Supply, Etc.

1. **General.**—In earlier issues (see No. 22, p. 498), reference is made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. **Number of Dairy Premises Registered.**—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only

DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1946.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.
Premises registered ..	18,196	22,777	23,000	13,455	346	(c)6,161
Cows in milk thereon ..	594,809	579,142	b686,650	136,338	12,890	(d)

(a) Premises within a district extending 25 miles north and 90 miles south of Perth only. (b) Estimated. (c) March, 1947. (d) Not available.

§ 7. Medical Inspection of School Children.

1. **General.**—Medical inspection of school children is carried out in all the States. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. **New South Wales.**—A complete system of medical inspection of school children is carried out by the School Medical Service which passed from the control of the Minister for Education to that of the Minister for Health as from 1st July, 1946. Medical inspection was continued as formerly, viz., in the metropolitan area, full medical examination of all children in first and fifth classes, and review of children in other classes who have been found defective in previous years, and, in country districts, the full medical examination of every child two or three times during the usual period of school attendance (6–15 years). Parents are notified of the defects found, and urged to have them treated. In the metropolitan area these notices are reinforced by "follow-up" work of school nurses, who also arrange hospital and clinic treatment in many cases.

The return of officers from active service and new appointments resulted by November, 1946, in a staff of 20 medical officers (including 3 psychiatrists of the Child Guidance Clinics and 1 oculist), 4 psychologists, 14 dental officers, 8 dental assistants, 14 school nurses, 3 social workers, 1 speech therapist, and 9 clerical officers. Seven school medical officers were engaged in country districts, and 9 in the metropolitan area, and of the 13 travelling dental clinics, 8 were engaged in metropolitan schools and 5 in country districts. One of the metropolitan dental officers was also engaged half-time at the clinic attached to the Out-patient's Department of the Royal Alexandra Hospital for Children.

Special attention is paid to the supervision of the health of high school pupils, both girls and boys, and medical inspection is carried out annually in high schools in the metropolitan area. as well as certain country schools.

Every student, before entering a Teachers' College, is medically examined, and any defects found must be remedied before final acceptance. Health supervision is maintained at these Colleges by women medical officers, who give courses of lectures on hygiene and physiology.

The Child Guidance Clinics examine free of charge children referred by school medical officers, teachers, officers of the Child Welfare Department and various outside bodies. Boys coming before the Children's Court were examined at the Clinic at the Metropolitan Boys' Shelter attached to the Court and at Yasmar Hostel for Boys.

Similar examinations are made in the case of girl delinquents.

The medical examination of certain children under the jurisdiction of the Child Welfare Department, Widows' Pensions Branch, is also carried out by medical officers of this service.

The following summary furnishes particulars of children medically examined in schools in 1946 :—

Number fully examined (routine inspection)	63,022
Number reviewed	24,501
Of those examined—percentage notified for defects, medical and/or dental	41.94 per cent.

These figures do not include record of the medical examination and health supervision of children (1) in residence at the Glenfield Special School for backward children, and (2) attending the Department's Nursery Schools.

The School Medical Service carries out regular and/or periodical investigations into problems affecting the health of children, and special investigations into outbreaks of infectious diseases occurring in schools. The sanitary condition of school buildings is also inspected. One medical officer attached to this service was included on the panel of lecturers to parents' groups on sex education of children.

The foregoing statement does not include record of the numerous medical examinations of teachers, and other Departmental work of a medical nature, done by the School Medical Service.

The cost of this service, excluding administration charges, for the year ended 30th June, 1946, was £35,738.

3. **Victoria.**—Medical inspection of school children was established in 1909. One of the objectives of the system is to have each child medically examined once every three years in its school life. In 1925 the Department concentrated on country work, and medical inspection has been undertaken since that date in country and rural districts, reaching the most remote corners of the State. In spite of the comparatively small medical inspection staff, the plan for triennial visits to State schools is being fairly well maintained though owing to unsurmountable difficulties in transport and accommodation medical inspection in country schools has been in temporary abeyance. Only a few of the registered and institutional schools are visited.

At the medical inspection every child is first weighed and measured, tested for vision and hearing, then undressed to the waist and medically examined as for life assurance, but with a fuller investigation of many hygienic factors, which at that age greatly influence the health and growth of the child. Opportunity is also taken to teach the child healthy habits and how to correct faults, and to get its co-operation for the remedying of defects found. In schools with an attendance of 70 or more, the older boys are examined by a medical man and the older girls by a medical woman. School nurses employed by the Department are devoted to "follow-up" work, i.e., visiting the homes and getting treatment for children found defective by the school medical officers. Owing to the smallness of the staff their work is confined to the metropolitan area.

In addition to the medical examination, each child in those schools visited by the school dentist receives dental treatment on entrance to school (if under 8 years of age), and each year thereafter, until it is 12 years of age, when it is left dentally fit. The present staff is arranged so that 3 dentists and 4 dental attendants are always on duty at the Melbourne Dental Centre, where children from the inner metropolitan schools are brought by the teacher for dental treatment. One dentist with dental attendants and equipment travels along the railway line far enough to give one year's work, using practically every town large enough to provide a day's work as a base. The school committees of the outlying schools are notified of the visit, and the parents are invited to bring to the base all children eligible for treatment, i.e., all children under 8 years of age, and all other children treated by the school dentists on previous visits. Two dentists with dental attendants are in charge of two fully equipped dental vans, each of which has an annual itinerary. In the year ended 30th June, 1946, the number of children examined was 14,837, extractions made 27,352, number of fillings 16,911, and other treatments 9,308.

Special attention is given to mentally and physically handicapped children. Retardants attending "special" schools and "opportunity" grades are examined annually. Those with defective eyesight ineligible for admission to the Blind Institute attend a "partially sighted" class and are kept under constant supervision. Others with minor postural defects attend a "remedial" gymnasium where special exercises are given under medical attention.

A Nose and Throat Clinic for the treatment of children with defective tonsils and adenoids was established in June, 1942. This clinic consists of 6 beds and is staffed by 5 full-time hospital nurses, the operations being performed by visiting nose and throat specialists. A nominal fee of 15s. is charged for each operation. To the 30th June, 1946, 5,307 operations had been performed. The clinic was temporarily closed on 6th August, 1945, owing to a mild epidemic of poliomyelitis.

The staff of the medical branch consists of 6 full-time and 1 part-time medical officers, 6 dentists, 10 dental attendants and 12 school nurses.

During the year ended 30th June, 1946, 19,203 children and 1,696 teachers were medically examined, and 14,837 children received dental treatment. In addition 5,567 homes were visited by the school nurses.

4. **Queensland.**—The School Health Services Branch, under the direction of the Chief Medical Officer, consists of three sections known as the Medical, Dental and Nursing Sections.

Medical inspection of schools and school children is carried out by one full-time and one part-time officer under the general direction of the Chief Medical Officer, School Health Services. These officers, as far as possible, examine children for cardiac and pulmonary conditions, and in addition make a thorough examination of all children referred to them by the school nurses.

The nurses now number 23. Each nurse is assigned a group of schools and is instructed to make a list at each school of those children who should be seen by the medical inspector at his next visit. She supervises the sanitation, cleanliness and ventilation of the school and notifies the head teacher of all infectious or verminous children or those suffering from impetigo, scabies, etc., who are then excluded. During 1945–46, school nurses examined 43,427 children. In the metropolitan area the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment.

The Department now has in its employ a staff of 20 dentists, and one part-time dental inspector. These officers are each assigned a district, which is not changed for three years unless for reasons which the Chief Medical Officer, on the recommendation of the Chief Dental Inspector, considers advisable. During 1945–46, 37,161 children were examined ; 22,902 extractions were performed ; and there were 20,839 fillings and 10,185 other treatments.

At the Wilson Ophthalmic School Hostel children suffering from trachoma are treated and educated. They are admitted from time to time on the recommendation of the part-time Ophthalmic Officer. Beneficial results have already been obtained. The Institution is situated at Eildon Hill, Windsor, and is fully equipped to treat all types of eye cases.

The work of Hookworm Control (the dealing with ankylostomiasis duodenale and necator Americanus infestation) throughout the State is under the control of the Director-General of Medical Services and his deputy. This activity has resulted in a marked reduction of the incidence of this dangerous menace on the northern coastal belt. Several sisters of the School Health Services are seconded for hookworm duty. The personnel consists of a microscopist, a health inspector and three trained sisters.

In order to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, three Rail Dental Clinics equipped on the most modern lines have been constructed. Another one is in course of construction and will shortly be in commission. A motor car is carried on a railway wagon attached to each clinic for use at each stopping place to visit the surrounding villages served by the rail centre.

This service cost £32,336 in 1945–46.

5. **South Australia.**—The system of medical inspection in force requires the examination of all children attending primary, junior technical, high and technical high schools. Children in the primary schools are examined in grades I., IV. and VII. ; in the junior technical and high schools, children are examined in their second and fourth years. Reports are furnished to the parents of any remediable defects found during these examinations. The medical inspectors meet the parents after the examination of

the children and give an address on the prevention and treatment of the conditions which were found during the inspection. After these lectures the parents are given an opportunity to ask questions regarding their children. When there is an epidemic or a threatened epidemic in a district, similar lectures are given and special visits paid to all the schools in that locality. All students are examined before they enter the Teachers' College and before they begin teaching. Medical and physiological tests on all candidates taking the Diploma of Physical Education are conducted four times during the course (2 years). Courses of lectures in Hygiene and in First Aid are given to all College students.

The medical staff consists of a principal medical officer, 3 full-time and one part-time medical inspectors and 4 trained nurses. A dentist, a dental assistant and a speech therapist are attached to the Medical Branch. The speech therapist examines children with defective speech, ascertains the nature of the defect and teaches the child how to overcome it.

During 1946, 14,284 children were examined by medical inspectors; of these, 707 required notices for defective vision, 99 for defective hearing, and 930 for tonsils and adenoids.

The following table shows the percentages of primary school children who were wearing spectacles in 1946 compared with 1932 :—

Year.	Grade 1.	Grade 2.	Grade 3.	Grade 4.	Grade 5.	Grade 6.	Grade 7
				BOYS.			
1932 ..	1·39	3·0	2·48	2·34	3·32	4·04	2·43
1946 ..	1·31	1·75	2·28	3·41	2·04	2·13	3·32
				GIRLS.			
1932 ..	1·34	2·83	2·45	3·09	2·51	3·14	2·6
1946 ..	1·12	2·45	1·95	2·67	3·02	3·39	4·63

This survey will be continued in 1947 and will include children attending secondary schools.

The Psychology Branch consists of a psychologist, assistant psychologist, vocational guidance officer, aptitude testing officer, employment officer, social worker and advisory teacher of opportunity classes. The work of the Branch may be divided into three sections—clinical, educational and vocational.

Clinical. The clinical work involves examining difficult children of many types, and covers such problems as backwardness, retardation, behaviour, truanting, delinquency, etc. The parents of all children examined are always interviewed and their co-operation is sought.

Educational. In addition to supervising 38 opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

Vocational. The vocational guidance officer tests and advises all children about to leave school.

The Branch also undertakes lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

The annual cost of these services is approximately £6,100.

6. **Western Australia.**—Under the Public Health Act 1911–1935 the medical officers appointed by the local authorities became medical officers of schools and of school children. The principle aimed at is—

- (*a*) in the metropolitan area, that each child shall be examined three times during its school life—
  - (i) when it enters school between 5 and 6 years,
  - (ii) in its eighth year, and
  - (iii) between the ages of 12 and 13 years ;
- (*b*) in the country, that the child is examined twice during its school life, or more often if it is possible to arrange such medical examinations.

In the Health Department there are two full-time and one part-time medical officers for schools and four school nurses employed. One of the medical officers is employed full-time in the country, and one full-time officer and one half-time officer are employed in the metropolitan area. One school nurse is employed in the country in special work connected with eye epidemics, etc. The other three nurses are employed in the metropolitan area. During 1946, 21,301 children were examined (metropolitan, 13,602 and country, 7,699, of whom 10,479 were boys and 10,822 girls). There were 198 schools visited, comprising—metropolitan, 79 State schools and 32 convents, and country, 77 State schools and ten convents. The two full-time and one part-time dental officers employed in 1946 visited 18 metropolitan and 12 country schools and gave attention to 2,653 children.

The cost of this service for 1945–46 was £4,727.

7. **Tasmania.**—During the year 1946 the School Medical Service occupied the full-time services of one medical officer. In addition arrangements were made with six private practitioners to carry out medical inspection of school children in the areas in which they practised. This work also formed part of the duties of twelve Government Medical officers, and nine school nurses were engaged full-time on this work in association with the doctors.

Two dental clinics, one each at Hobart and Launceston, attended to the needs of children in those centres, while three mobile dental clinics were in operation in the North-West, North-East and Southern parts of the State.

The number of children examined during 1946 by medical inspectors was 13,039, of whom 5,267 had defects. First visits to dentists numbered 8,357 and repeat visits 9,079.

The cost of medical and dental services for the year ended June, 1946, was £10,232.

8. **Australian Capital Territory.**—By arrangement, education facilities are provided by the Education Department of New South Wales. The Commonwealth Department of Health, however, took over from the State in 1930 the medical inspection of school children and carried out examinations of entrants and those leaving during 1930.

Subsequent to 1931, examinations of entrants and those leaving the primary schools have taken place. During 1937 this examination was supplemented by examinations of all pupils of all rural schools (including Duntroon and Molonglo). No examinations were made in 1942. Since 1943 all primary pupils of Government schools in the Territory have been medically examined annually. During 1946 the examinations showed that 34 per cent. had dental defects, 2.7 per cent. had some pathological condition of the nasopharynx, 7.2 per cent. had eye defects, 3.7 per cent. had ear defects, 11 per cent. showed some evidence of minor chest deformity, and 1·4 per cent. were 10 per cent. or more underweight for their height and age.

§ 8. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1942 to 1946 no less than 25,391 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infantile mortality will be found in Chapter XVII. " Vital Statistics " :—

INFANTILE DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1942.	1943.	1944.	1945.	1946.	1942.	1943.	1944.	1945.	1946.
NUMBER OF INFANTILE DEATHS.										
New South Wales	877	860	749	813	786	1,239	1,212	1,080	1,076	1,246
Victoria ..	888	809	705	637	730	609	590	553	518	538
Queensland ..	234	291	258	270	251	502	587	510	525	540
South Australia ..	245	259	211	224	256	203	223	176	170	172
Western Australia	184	170	173	146	160	181	172	181	169	216
Tasmania ..	60	74	57	28	58	165	153	142	131	149
Australia(*a*) ..	2,488	2,463	2,153	2,118	2,241	2,899	2,937	2,642	2,589	2,861
RATE OF INFANTILE MORTALITY.(*b*)										
New South Wales	37.73	31.86	26.45	27.56	24.74	42.10	40.03	34.51	33.46	35.12
Victoria ..	43.93	35.03	31.00	26.87	27.07	38.76	36.83	33.29	29.61	27.27
Queensland ..	37.49	37.46	30.18	28.18	25.65	33.57	37.95	31.93	30.65	31.33
South Australia ..	39.48	34.67	28.53	28.11	27.89	40.02	39.30	29.76	28.03	25.93
Western Australia	37.51	29.66	29.27	25.16	25.01	36.24	36.22	36.49	34.72	37.84
Tasmania ..	42.37	47.13	39.31	17.85	29.59	42.43	37.99	37.87	31.07	30.49
Australia(*a*) ..	39.98	33.91	28.95	27.11	26.04	39.17	38.54	33.65	31.60	31.90

(*a*) Excludes Territories. (*b*) Number of deaths under one year per 1,000 births registered.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after care in the case of mothers and infants. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics crèches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. **Government Activities.**—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter VIII. "Public Benevolence," etc.). Under the provisions of the Maternity Allowances Part V. of the Social Services Consolidation Act 1947, from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. Detailed particulars regarding Maternity Allowances are given in Chapter VIII. " Public Benevolence, etc."

3. **Nursing Activities.**—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (see No. 22, pp 515–6) information may be found concerning the activities of institutions in each State.

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :—

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1946.

Heading.	N.S.W.	Victoria. (a)	Qld. (a)	S. Aust.	W. Aust. (a)	Tas.	A.C.T.	Total.
Baby Health Centres—								
Metropolitan .. No.	69	106	39	59	15	15	..	303
Urban-Provincial and Rural .. No.	188	210	133	114	16	41	12	714
Total .. No.	257	316	172	173	31	56	12	1,017
Attendances at Centres No.	1,176,854	833,248	352,726	220,300	120,383	101,252	11,823	2,816,586
Visits paid by Nurses No.	28,993	82,460	20,246	30,869	14,072	33,092	3,128	212,860
Bush Nursing Associations —Number of Centres ..	30	75	11	30	2	22	..	170

(a) Year ended 30th June, 1946.

The number of attendances at the Baby Health Centres has increased very considerably in recent years. The following are the figures for the years 1939 to 1945 :—1939, 1,869,770 ; 1940, 2,035,299 ; 1941, 2,128,961 ; 1942, 2,240,294; 1943, 2,327,279 ; 1944, 2,677,030 ; and 1945, 2,927,764.

CHAPTER X.

THE TERRITORIES OF AUSTRALIA.

GENERAL.

The Territories under the control of Australia are: The Northern Territory; the Australian Capital Territory; Papua (formerly British New Guinea); Norfolk Island; the Territory of New Guinea (under Trusteeship Agreement with the United Nations Organization); Nauru (under Trusteeship Agreement with the United Nations Organization); the Territory of Ashmore and Cartier Islands; and the Australian Antarctic Territory.

Under the Ashmore and Cartier Islands Acceptance Act 1933 the Commonwealth Government accepted these islands from the British Government. They were administered by Western Australia until July, 1938, when the Act was amended to annex them to the Northern Territory.

The Australian Antarctic Territory, estimated area 2,472,000 square miles of a total area of approximately 5,000,000 square miles for the Antarctic Continent, was established by an Order in Council dated 7th February, 1933, which placed under the control of the Commonwealth of Australia that part of the Territory in the Antarctic Seas which comprises all the islands and territories, other than Adelie Land, situated south of the 60th parallel of south latitude and lying between the 160th and 45th meridians of east longitude. The Territory was accepted by the Commonwealth of Australia on 24th August, 1936, when the Antarctic Territory Acceptance Act 1933 came into force by proclamation issued by the Governor-General.

The results of the census of the Territories at 30th June, 1947, may be found in the separate Census bulletins and parts published by this Bureau.

In the Territories of Papua, Norfolk Island and Nauru, Australian currency is used. In the Territory of New Guinea, however, local coins consisting of silver shillings, cupro-nickel sixpences and threepences, and bronze pennies are used, supplemented by Australian currency.

THE NORTHERN TERRITORY.

§ 1. Return of Civil Activity in Darwin.

During 1945–46, after the cessation of the war in the Pacific, the control of the Northern Territory was transferred from the military back to civilian hands. The Administrator re-occupied Government House at Darwin at the end of July, 1945, and by the end of 1945–46 a considerable part of the civil administration had returned from Alice Springs, and the various services had reverted to civil control. Commercial activity also recommenced. The repeal of the National Security (Emergency Control) Regulations on 28th February, 1946, permitted the re-entry of civilians into Darwin. They had earlier been allowed as far north as Pine Creek. Almost immediately, former residents, compulsorily evacuated in December, 1941 and early in 1942, and also many new arrivals, began to flock to Darwin. On 17th January, 1946, under the Darwin Lands Acquisition Act 1945, the Commonwealth became the owner of all privately owned lands and improvements thereon in Darwin and suburban areas. Shops, garages, restaurants and cafés had been opened in all suitable existing buildings, and soon applications to erect temporary premises on vacant lands were received. At 30th June, 1946, 175 acknowledgments of tenancy, 32 permissive occupancies and 20 special purpose leases had been granted.

§ 2. Area and Population.

1. **Area.**—Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles, or 335,116,800 acres—about six times as large as Victoria.

2. **Population.**—(i) *Europeans.* At the census taken in 1881 there were only 670 Europeans in the Territory. The number increased slowly, reaching 3,767 persons in 1918. At the census of 1933 the white population had decreased to 3,306. This number, however, was 34.5 per cent. greater than the figure at the census of 1921. At the census of 1947 it had risen to 9,116, an increase of 176 per cent. on the 1933 figures.

(ii) *Non-Europeans.* The number of full-blood non-Europeans, excluding Australian aboriginals, in the Northern Territory on 30th June, 1947 was 388, of whom 250 were Chinese, the remainder being mainly Filipinos (47), Fijians (23), Japanese (21), and Malays (20). There were at one time over 4,000 Chinese in the Territory.

The half-caste population recorded at the census of 1947 numbered 1,364, of whom 1,247 were half-caste Australian aboriginals. Corresponding figures as at the 1933 census were, respectively, 800 and 743.

(iii) *Total Population.* The estimated population at 31st December in each of the years 1939 to 1946, revised in accordance with the preliminary results of the 1947 census, is given in the following table :—

NORTHERN TERRITORY : POPULATION (EXCLUDING ABORIGINALS).

Year.	Males.	Females.	Total.
1939	5,145	2,151	7,296
1940	6,340	2,637	8,977
1941	7,251	2,505	9,756
1942	6,045	2,235	8,280
1943	7,208	3,188	10,396
1944	7,229	3,240	10,469
1945	7,249	3,291	10,540
1946	7,261	3,375	10,636

The population at the Census of 30th June, 1947, was 7,378 males and 3,490 females, total 10,868.

(iv) *The Aboriginals.* A special article contributed by Dr. W. Ramsay-Smith on the subject of the Australian aboriginals was incorporated in Official Year Book No. 3 (p. 158). The Chapter " Population " in Official Year Book No. 17 contained information regarding the number and distribution of aboriginals and the measures taken by the States (in the case of the Northern Territory, by the Commonwealth) to protect them and conserve their interests. Large numbers of the aboriginals in the Territory are still outside the influence of Europeans. The total number of full-blood and half-caste aboriginals at 30th June, 1944, was estimated at 14,153, of whom 3,314 were in regular employment. There are fifteen " aboriginal " reserves, comprising an area of 67,244 square miles. (See also Chapter XVI. " Population ".)

§ 3. Legislation and Administration.

On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth. The terms are outlined in Official Year Book No. 15, p. 940. By the Northern Australia Act 1926, the Territory was divided into two parts, Central Australia and North Australia, separated by the 20th parallel of south latitude, each administered by a Government Resident. In addition, Advisory Councils and a Development Commission were provided for. The Act of 1926 was repealed by the Northern Territory (Administration) Act 1931. The administration of the Territory was placed in the hands of an Administrator, residing at Darwin, assisted by a Deputy Administrator, residing at Stuart (Alice Springs). The designation of the latter office was later changed to that of District Officer. The Governor-General was empowered to make ordinances having the force of law in and in relation to the Territory, subject to disallowance by either House of the Commonwealth Parliament (repealed by 1947 amendment).

An amendment to the Northern Territory (Administration) Act, assented to in June, 1947, enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator, seven official members (nominees of the Administrator) and six members elected from five districts (Darwin district has two). The normal term of office of the elected members is three years. The Council is able to make ordinances for the Territory, but it must submit each one to the Administrator for assent. The Administrator may, or may not, assent, or he may refer the ordinance to the Governor-General. The Governor-General may also disallow any ordinance assented to by the Administrator within six months from the date of assent. Ordinances that (1) grant or dispose of Crown lands, (2) make leases or grants of land or money or gifts to the Administrator, or (3) relate to aboriginals or aboriginal labour, cannot be assented to by the Administrator, unless they contain a clause deferring their operation for the Governor-General's approval. All ordinances must be laid before Parliament after assent. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who may take part in debates, but may not vote, except on a motion for the disallowance of any ordinance of the Northern Territory or on any amendment of any such motion.

§ 4. Physiography.

1. **Tropical Nature of the Country.**—The Territory is within the torrid zone, with the exception of a strip 2½ degrees wide which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast-line are enumerated in Official Year Book No. 1, p. 66; the rivers in No. 2, p. 76; the mountains in No. 3, p. 67; the lakes in No. 4, pp. 77, 78; the islands in No. 5, pp. 71, 72; and the mineral springs in No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 5. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars appear in Official Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous) and frogs abound. There are many varieties of freshwater fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting.

3. **Flora.**—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriously to the water's edge. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being :—*Euphorbiaceae, Compositae, Convulvolaceae, Rubiaceae, Goodenoviaceae, Leguminosae, Utricaceae.*

Fuller particulars regarding fauna and flora are given in Official Year Book No. 6, pp. 1116–7.

§ 6. Production.

1. **Land Tenure.**—At 30th June, 1946 (figures at 30th June, 1945, in parenthesis), there were 248,758 (255,463) square miles held under lease, licence and permit in the Northern Territory, comprising 169,729 (183,668) square miles of pastoral leases, 696 (696) square miles of pastoral permits, 75,581 (68,250) square miles of grazing licences, 118 (117) square miles of agricultural leases and 2,634 (2,732) square miles of miscellaneous leases.

2. **Agriculture.**—Up to the present agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coco-nuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. There is a large stretch of first-class coco-nut land on the coast, but hitherto planting has not been attempted on a commercial scale. For the encouragement of primary production a Primary Producers' Board was established in 1931. There was little activity in agriculture during 1940–41 and the outlook was not hopeful. No information of recent developments is available as the collection of agricultural statistics was temporarily discontinued after 1940–41 owing to the war. It is hardly practicable to develop agricultural production in the sub-tropical district around Darwin, and the history of efforts in this connexion is one of almost complete failure.

3. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily.

During 1945–46 veterinary and stock administration, held by the Army during the war years, was handed back to civil control. This transition period made the compilation of statistics difficult. Cattle exported during the year numbered 140,109—80,370 to Queensland, 48,864 to South Australia and 10,875 to Western Australia. The value was £1,142,776, an average of £8 per beast. Of those exported to South Australia, 33,346 were fats for immediate slaughter, and averaged £13 per beast. Sheep exported numbered 3,544—all to South Australia. Importations were mainly of bulls and stallions for breeding, sheep for butchering at Alice Springs, and cattle from the Kimberleys moving through the Territory. The numbers were—bulls, 442 ; other cattle, 1,732 ; stallions, 24 ; other horses, 79 ; rams, 67 ; other sheep, 755.

The estimated number of live stock in the Territory at the end of the years 1939 and 1943 to 1946 is given in the table hereunder :—

NORTHERN TERRITORY : LIVE STOCK.

31st December—	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1939 ..	32,721	922,581	38,587	483	20,335	331	1,443	366
1943 ..	30,534	978,569	25,575	191	15,149	302	1,460	416
1944 ..	31,803	984,370	29,269	146	11,384	284	1,167	426
1945 ..	31,883	960,039	18,561	407	12,810	298	1,275	471
1946 ..	30,019	972,990	28,005	208	11,914	296	1,621	513

4. **Mining.**—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 gold production from alluvial deposits reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably but as long as the alluvial deposits lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably. The production of metals other than gold has suffered on account of the vagaries of prices, and the high cost of transport and of white labour. Owing to the exceptionally high price the search for gold was stimulated and production increased annually from 1931 to 1940, but decreased thereafter owing to lack of manpower occasioned by the war. The Warramunga Goldfield, of which Tennant Creek is the centre, has been the principal producing goldfield and gives every indication of increasing production for a number of years once the difficulty, since the war, in obtaining labour and machinery has been overcome. This field has produced gold to the total value of £1,292,000 to the end of 1946. The necessity for satisfying Australian requirements of mica of strategic quality led to the regional development of the Harts Range mica fields, where roads and water supplies, hitherto unknown in this country, were made and established, and as a result, the mica fields were better exploited in the war years. Development has continued under a scheme of Government assistance. Production of wolfram concentrates fell from £58,166 in 1943 to £31,583 in 1944, rising to £42,937 in 1945, but falling off to £21,696 in 1946 when the war-time price of 110s. per unit dropped to 60s. The demand for tantalite for radar work and non-corrosive surgical equipment resulted in a production valued at £1,043 in 1943, when the Commonwealth Government purchased concentrates for forwarding to the United States of America. The use of ochre for camouflage paints caused an increase in production from the Rumbalara deposits ; but production has fallen off since the end of the war. Tin concentrates were produced from the Finniss River area and the Maranboy tinfield.

(ii) *Mineral Production.* The following table shows the value of mineral production, for the years 1943 to 1946 compared with 1939 :—

NORTHERN TERRITORY : MINERAL PRODUCTION.

Year.	Gold.	Tin Concentrates.	Ochre.	Copper Ore.	Mica.	Wolfram.	Tantalite.	Total Value all Minerals. (a)
	£	£	£	£	£	£	£	£
1939 ..	163,414	4,487	607	2,248	15,539	58,183	..	244,478
1943 ..	40,880	5,594	4,800	2,393	17,919	58,166	1,043	130,795
1944 ..	57,803	2,086	5,090	1,878	26,621	31,583	962	126,025
1945 ..	76,811	5,026	2,078	3,812	44,955	42,937	578	176,197
1946 ..	105,376	3,228	1,983	6,282	27,969	21,696	..	166,543

(a) Includes bismuth—£2 in 1944 and £9 in 1946.

The value of all minerals produced to the end of 1946 was approximately £5,842,500.

In 1934 the Governments of the Commonwealth and the States of Queensland and Western Australia agreed to co-operate in the conduct of a geological and geophysical survey of certain areas in the northern parts of Australia, including the Northern Territory. More detailed reference to the survey, which was completed in 1940, appears in Official Year Book, No. 35, page 744.

5. **Pearl, Bêche-de-Mer, and Other Fisheries.**—In 1884 mother-of-pearl-shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. The production of pearl-shell has declined rapidly since 1937–38. The production for 1939–40 amounted to only 179 tons, valued at £14,350, compared with 804 tons, £67,000, in 1937–38 and 410 tons, £31,500, in 1938–39. Up to the end of 1945–46 pearl shell fishing had not been resumed from Darwin, although the high price offering for shell (up to £600 per ton compared with £190 pre-war) attracted inquiries. In view of the importance of the industry it was included in the terms of reference of the Northern Australia Development Committee. A conference was held in Melbourne in March, 1946, between representatives of the Western Australia pearl-shell industry, the Northern Territory Administration, the Western Australian and Commonwealth Governments, as a pearling sub-committee, which reported and made recommendations to the Northern Australia Development Committee. The sub-committee considered the following matters—labour, boats and equipment, financial assistance, the marketing problem and economic survey, institution of administrative arrangements and biological investigations. The recommendations were placed before the Minister for the Interior by the Northern Australia Development Committee. On the question of labour the Committee recommended that approval be given for the admittance to Australia of indentured men while the possibility of training and employing alternative labour was being investigated, and suggested that the whole position should be reviewed in five years. The depleted condition of the known beds and the depressed market were responsible for fewer Japanese vessels competing with local vessels during 1939–40.

Three fishing licences and two boat licences were issued during 1938–39 in connexion with bêche-de-mer fisheries. Prices were not remunerative, however, and the production was valued at only £252.

Darwin continues to provide a firm and ready local market for fish. The lack of suitable refrigerating plants on the fishing-boats is responsible for the deficiency of regular supplies of fish except in limited quantities obtained from traps close to the town.

§ 7. Land Tenure.

1. **General.**—A description of the system of land tenure in force in the Territory in 1928 was given in Chapter V, "Land Tenure and Settlement", Official Year Book No. 22. This description has been brought up-to-date in the following two paragraphs.

2. **Pastoral, Agricultural, etc., Leases.**—(i) *Pastoral Leases.* A pastoral lease may be granted for such term, not exceeding 42 years, as the Administrator determines. The rental for the first period is fixed by the Administrator, and is subject to re-appraisement on such dates as are specified in the lease or as are prescribed.

(ii) *Agricultural Leases.* Agricultural lands are classified, and the maximum area which may be included in any one lease is as follows :—Division A, Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres : Division B, Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres. Agricultural leases are granted in perpetuity, and the rent for the first period is fixed by the Administrator, and is re-appraised every

21 years. The lessee must—(*a*) in the case of lands for mixed farming and grazing, stock the land to the extent prescribed by the regulations and keep it so stocked; (*b*) establish a home within 2 years and reside on the leased land for 6 months in each year in the case of land for cultivation, and for 4 months in each year in the case of land for mixed farming and grazing; (*c*) cultivate the land to the extent notified by the Administrator; and (*d*) fence the land as prescribed.

(iii) *Leases of Town Lands.* Leases of town lands are granted in perpetuity, the rental being fixed every 14 years. Such leases must, in the first instance, be offered for sale by public auction, and if not so sold, may be allotted by the Administrator to any applicant, at the rental fixed by the Administrator. The lessee must erect, within such time as is notified, buildings to the value specified in the conditions of sale.

(iv) *Miscellaneous Leases.* The Administrator may grant a lease of any portion of Crown lands, or of any dedicated or reserved lands, for any prescribed or approved purpose. Such leases are for a term not exceeding 21 years, and may be offered for sale by public auction, or granted to an applicant at an annual rental fixed by the Administrator.

(v) *Leases of Garden Lands.* Leases of garden lands may be granted over areas within 10 miles of a town, provided the Administrator has declared the area as garden lands.

(vi) *Grazing Licences.* Licences may be granted to graze stock on Crown lands for such period, not exceeding one year, as is prescribed, and at the rent and on the conditions specified.

(vii) *Occupation Licences.* Licences may be granted for any period not exceeding 5 years, and on specified rentals and conditions, for the purpose of drying or curing fish, or for any manufacturing or industrial purpose, or for any prescribed purpose.

(viii) *Miscellaneous Licences.* The Administrator may grant licences for miscellaneous purposes for a period not exceeding 12 months on prescribed terms and conditions.

(ix) *Leases to Aboriginals.* The Governor-General may grant to any aboriginal native, or to the descendant of any aboriginal native, a lease of Crown lands not exceeding 160 acres for any term of years upon such terms and conditions as he thinks fit.

3. **Mining Leases, etc.**—(i) *General.* Mining generally is governed by the Mining Ordinance 1939–1945, and special Ordinances have been promulgated by the Commonwealth respecting mining for mineral oil and coal, encouragement of mining, inspection and regulation of mining and inspection of machinery.

(ii) *Holdings under Miners' Rights.* The fee for a miner's right is 5s. for 12 months from the date of issue, and a holder thereof is entitled to occupy Crown lands for mining purposes, to construct races, to divert water, to reside on his holding, etc.

(iii) *Gold-mining Leases.* The area of a gold-mining lease must not exceed 20 acres, and the term is 21 years, renewable for a further 21 years. The rent is 2s. per acre per annum. A royalty of 3d. in the £ on the gross value of all gold and minerals won must be paid, and leases must be worked constantly by not less than 2 men for the first 12 months and thereafter by not less than 1 man for every 5 acres with a minimum of 2 men, unless exemption is obtained.

(iv) *Mineral Leases.* Mineral leases may be granted in blocks not exceeding 40 acres each. A mineral lease is issued for the same term as a gold-mining lease, with similar right of renewal. The rent is 1s. per acre per annum, and the royalty on minerals is the same as in the case of a gold-mining lease, except that payment was suspended as a war-time measure, and such temporary suspension still obtains.

(v) *Dredging Claims.* These claims may be granted for dredging for gold or minerals at a rental of 2s. per acre per annum. The maximum area of each claim must not exceed 300 acres, and 6 months after registration, the holder must employ continuously on the claim not less than 3 men and fully manned machinery valued at not less than £1,000.

(vi) *Mineral Oil and Coal Licences.* A licence to search for mineral oil or coal, or for both, may be granted over an area not exceeding 1,000 square miles for a period of 5 years on payment of an annual fee of £10. At least 4 white men must be employed for not less than 6 months in each year. A holder of a mineral oil licence who discovers payable mineral oil on the land held under his licence has a preferential right to a mineral oil lease of 160 acres, together with a reward area of 640 acres thereon. A discoverer of coal in payable quantities has a preferential right to an area of 640 acres as a coal lease.

(vii) *Mineral Oil and Coal Leases.* Leases may be granted for a period of 21 years, renewable for a further 21 years, for mining for mineral oil or coal, the maximum areas being (*a*) for mineral oil, 160 acres; and (*b*) for coal, 640 acres. In the case of mineral oil and coal, the annual rent is 1s. per acre, and a royalty of 5 per cent. on the gross value of all crude oil obtained is payable; the lessee must also work the land to the satisfaction of the Minister. In the case of coal, the royalty and conditions are fixed by regulation.

(viii) *Business and Residence Areas.* A business area may be granted at the prescribed fee and authorizes the holder to occupy on a gold-field or mineral field, for the purpose of residence and carrying on his business, an area not exceeding 1 acre, provided that when the area is for residence only it shall not exceed one-quarter of an acre.

(ix) *Garden Areas.* The warden may grant market garden areas upon any gold-field or mineral field for the purpose of growing fruit or other garden produce. The conditions as to rent, etc., are as prescribed, but the area of each garden area must not exceed 5 acres.

§ 8. Commerce, Shipping and Air Services*.

1. **Trade.**—No record is kept of the trade between the States and Territory. The value in Australian currency of the direct oversea imports and exports for 1901 and for the years 1938–39, 1940–41, 1941–42, 1945–46 and 1946–47 is given hereunder :—

NORTHERN TERRITORY: OVERSEA IMPORTS AND EXPORTS.

Items.	1901.	1938–39.	1940–41.	1941–42. (*a*)	1945–46.	1946–47.
	£	£	£	£	£	£
Imports ..	37,539	36,831	106,079	175,211	216,126	98,007
Exports ..	29,191	12,729	24,865	13,341	221,406	17,098

(*a*) July to April.

* Owing to the war the port of Darwin was closed as a Customs station from April, 1942—when Customs officers were withdrawn—till July, 1945, and for this period no details of trade and of shipping movements are available for the port, which remained purely military in character and under the control of the Defence authorities.

2. **Shipping.**—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between the Eastern States and Singapore. In addition to pearlers and other small craft, larger vessels make occasional visits, while a periodic service between Fremantle and Darwin is carried out by vessels belonging to or under charter to the Western Australian State Shipping Service. The following figures show

the number and net tonnages of oversea and interstate vessels which entered at and cleared from the port of Darwin during the years 1938–39, 1940–41, 1941–42, 1945–46 and 1946–47 :—

NORTHERN TERRITORY : SHIPPING.

Year.	Entered.		Cleared.	
	No. of Vessels.	Net Tonnage.	No. of Vessels.	Net Tonnage.
1938–39	161	181,961	172	179,422
1940–41	93	213,710	89	209,963
1941–42 (a)	81	207,970	82	206,378
1945–46	9	31,164	8	25,347
1946–47	23	50,890	23	48,136

(a) July to April only.

The foregoing figures exclude particulars of coastwise shipping. During 1938–39 fourteen vessels of 285 tons net were entered at Darwin as coastwise and two vessels of 66 tons net during 1940–41. No vessels were entered as coastwise during 1941–42, 1945–46 and 1946–47.

3. **Air Services.**—Prior to the outbreak of war in Europe, Darwin was the first port of arrival in Australia of aircraft from Europe, Singapore and Netherlands East Indies. The air services calling at Darwin were as follows :—Qantas Empire Airways Ltd., under contract to the Commonwealth Government, which operated the Sydney–Darwin–Singapore section of the Empire Flying Boat Service with a twice weekly service in each direction : the MacRobertson-Miller Aviation Co. Ltd., which operated a twice weekly service in each direction between Perth and Darwin, linking up with the Qantas service at the latter point ; Guinea Airways Ltd., which operated a twice weekly service in each direction between Adelaide and Darwin ; and the K.N.I.L.M. (Dutch) Company, which extended their Amsterdam-Batavia air route to Sydney via Darwin in 1938, operating a weekly service in each direction which was increased to a twice weekly frequency from 2nd January, 1942. Oversea air services with Darwin were suspended early in 1942 as a result of war with Japan. On 7th April, 1946, Qantas Empire Airways Ltd. reverted to the pre-war practice of operating to Singapore via Darwin. For further information *see* Chapter V.—Transport and Communication, H. Aviation.

§ 9. Internal Communication.

1. **Railways.**—Under the agreement made between the Commonwealth and the State of South Australia for the transfer of the Northern Territory, which was ratified by the Northern Territory Acceptance Act 1910, the Commonwealth was to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin via Port Augusta).

The Northern line from Adelaide terminates at Alice Springs, about 192 miles north of the southern boundary of the Territory. The Commonwealth Government acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926, the control thereof was transferred to the Commonwealth Railways Commissioner. The line from Darwin to Katherine River, about 200 miles, has been extended as far as Birdum, 316 miles from Darwin.

The Clapp plan for the standardization of Australian railways recommended, *inter alia*, the construction of a standard gauge (4 ft. 8½ in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum–Darwin line (*see* Chapter V.—"Transport and Communication, B. Railways", § 1 General), but not the conversion of the Port Augusta–Alice Springs line nor the construction of a 4 ft. 8½ in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in the Railway Standardization Agreement Act 1946, involving the Commonwealth and the States of New South Wales, Victoria and South Australia. The Birdum–Dajarra project is dependent on the completion of the Queensland section of the general plan.

2. **Roads.**—During the war roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North–South Road or Stuart Highway, is 950 miles long, and runs via Larrimah and Tennant Creek. The Mount Isa–Tennant Creek Road (Barkly Highway) is 403 miles long. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. During 1945–46 civilian carriers made regular trips over it with foodstuffs for Darwin. The Barkly Highway is not used to the same extent, but both roads, with their water bores and communications, are a national asset, and during 1945–46 it was announced that they were to be maintained.

3. **Posts.**—Postal communication is maintained by vessels which maintain a regular service between the Territory and the Eastern States. In addition, the vessels belonging to the State Steamship Service of Western Australia give a periodic service between Fremantle and Darwin. Mail is carried between the capital cities of Australia and Darwin by the airway companies operating in each State. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

4. **Telegraphs.**—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on 22nd August, 1872, at a cost of nearly £500,000. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

Long-distance telephone communication between Darwin and the other capital cities of Australia was established after the outbreak of war in the Pacific.

High-power wireless stations have been constructed by the Commonwealth Government at Wave Hill in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

10. Educational Facilities.

Darwin Public School re-opened on 21st May, 1946, with over 100 scholars. The schools at Pine Creek and Katherine re-opened on 17th August, 1945.

Prior to 1st January, 1945, teachers were supplied on loan by the South Australian Government for service in the southern parts of Northern Territory (mainly at Alice Springs and Tennant Creek), and the Queensland Government similarly supplied teachers for Darwin and other more northern parts. In 1944 an agreement between the Commonwealth and South Australian Governments transferred the responsibility for the work in the schools in the whole of the Northern Territory to the South Australian Education Department. The Commonwealth Government provides schools and furniture, and the Department provides teachers and determines the curricula.

In spite of the shortages of manpower and materials it has been possible to make additions and improvements to the various school buildings.

Arrangements were in hand during 1945–46 to provide transport, because of the severity of the climate in the Northern Territory, to schools in Alice Springs and Darwin.

§ 11. Finance.

Revenue and expenditure for the Territory for the years 1938–39 and 1942–43 to 1945–46 are given below :—

NORTHERN TERRITORY : REVENUE AND EXPENDITURE.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
REVENUE.					
Taxation—	£	£	£	£	£
Customs and Excise	7,916	(a)	(a)	(a)	19,286
Sales Tax	757	(a)	(a)	(a)	2
Land and Income Tax ..	9,306	(b) 314	(b) 23	(b) 3	(b) 2
Probate and Stamp Duties ..	1,486	2,724	869	2,316	4,578
Pay-roll Tax	..	(a)	(a)	(a)	(a)
Medical Benefits Tax ..	..	2,014	111	10	17
Railways—					
North Australia	50,471	791,555	822,582	819,884	174,371
Central Australia	137,521	1,584,537	1,736,783	1,045,423	710,648
Posts, telegraphs and telephones	21,352	130,420	275,352	214,102	113,874
Territorial	27,994	36,779	41,205	37,390	25,368
Miscellaneous	36,738	69,225	98,481	45,245	86,636
Total	293,541	2,617,568	2,975,406	2,164,373	1,134,782
EXPENDITURE.					
	£	£	£	£	£
Territory Administration (c) ..	210,929	165,756	192,114	190,440	214,563
Developmental Services ..	69,314	11,429	9,435	19,615	20,199
Postmaster-General's Department (d)	25,423	50,446	46,740	45,698	53,931
Other Departments	29,712	7,367	5,739	7,256	25,151
Rents, Repairs, Maintenance ..	21,189	74,957	25,138	9,288	37,097
Works	243,980	94,779	72,853	84,392	70,189
Interest	66,757	50,083	49,590	48,130	47,555
Sinking Fund	14,044	17,070	17,923	18,819	19,760
Unemployment Relief	5,890	1,380	795	738	1,595
Shipping Subsidy	10,940	800	1,000	800	300
Miscellaneous	2,400	..	..	..	..
Railways—					
Working Expenses	269,560	1,131,425	1,507,249	1,301,494	803,940
New Works	29,204	6,574	19,643	35,198	25,011
Interest	274,537	252,934	250,791	244,470	232,051
Sinking Fund	51,966	63,073	66,061	69,320	72,583
Total	1,325,845	1,928,073	2,265,071	2,075,658	1,623,925

(a) Not dissected. (b) Territorial tax only, Commonwealth tax not dissected. (c) Salaries, contingencies and miscellaneous. (d) Salaries, contingencies and conveyance of mails.

AUSTRALIAN CAPITAL TERRITORY.

1. **Introductory.**—In Official Year Books Nos. 4 and 5 information was given in Section XXXI. in regard to the events leading to the selection of the Australian Capital Territory and the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with extensively and topographical and contour maps accompanied the letterpress, as well as reproductions of the award-winning designs for the laying out of the city. On 12th March, 1913, the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of " Canberra " as the name of the capital city was announced. The Seat of Government Acceptance Act 1909–1938 provides that the Territory shall be known as the Australian Capital Territory. (A special article contributed by Dr. F. Watson, entitled " Canberra Past and Present ", appears on p. 454 of Official Year Book No. 24).

2. **Transfer of Parliament.**—On 9th May, 1927, Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York, our present Monarch His Majesty King George VI., the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. For particulars of the opening ceremony see Official Year Book No. 21, p. 604.)

3. **Administration.**—In Official Year Book No. 18 a summary is given of the development of the administration prior to the taking over of the control of the Territory by the Federal Capital Commission, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission.

The administration of the Territory by the Federal Capital Commission was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924–1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932, the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works and Housing, and the Attorney-General's Department.

4. **Progress of Work.**—The general progress of the work of construction up to the time the Territory was taken over by the Commission is outlined in Official Year Book No. 18. Later progress under the Commission is described in Official Year Book No. 22.

Since the reversion of the powers and functions of the Commission to the Government in 1930, there has been great development of works in the Territory, despite the halts in activity caused by the general reduction in Governmental expenditure during the depression years, and the necessity for restricting labour and materials to purely defence purposes during the war years. New sub-divisions of suburbs—principally in Griffith, Deakin, Turner and North Ainslie—have been developed, involving the construction of new roads, pavements, kerbing and guttering, of water, sewerage, drainage and electrical networks, the digging and stocking of plantations and parks, and the planting of hedges. To serve these new areas considerable additions had to be made to the existing water and electric supply systems in the form of new mains, sub-stations, reservoirs, etc. In addition to the development of new residential areas, other works in Canberra during the period 1930–45 were built with a wide variety of purposes—educational, cultural, scientific, recreational, departmental, public utility and defence. Works have not been restricted to the city area alone, and much has been done to improve roads, bridges, culverts, &c., in the surrounding districts. The widening of roads, regrading, provision of deviations and surfacing with bitumen, the building of bridges, and the construction and improvement of roads of access to tourist resorts have proceeded as continuously as the availability of funds, labour and materials has permitted.

The following list of the more important works completed under Governmental authority during the period 1930–45 shows the wide range covered :—The Institute of Comparative Anatomy, with laboratories and accommodation for a museum of Australian fauna ; laboratories of the Division of Economic Entomology and Plant Industry of the

Institute for Scientific and Industrial Research ; a section of the National Library ; the Australian War Memorial ; additions to Government House ; a modern well-equipped high school ; primary schools ; a new Community Hospital ; a swimming pool with a modern filtration chlorination plant ; the W. J. Farrer Memorial at "Lambrigg", Tharwa ; a National Rose Garden ; a fire and ambulance station ; a regional broadcasting station ; the Patent Office building ; the Barton Hostel ; reservoirs at Black Mountain, Mount Ainslie and Red Hill ; an abattoirs ; a civil aerodrome ; a civil aviation wireless station ; naval wireless stations ; a R.A.A.F. aerodrome ; a new Royal Military College at Duntroon ; a military training school at Duntroon ; an Empire Air Training Depot (technical) ; a drill hall.

During the same period about 1,400 houses were built by the Government.

Private enterprise also played its part in building activity, and private buildings constructed included houses, several blocks of flats, two churches, a new private school, and extensive additions to existing private schools, a private hospital, a soldiers' club, a picture theatre, a broadcasting station and studio, etc.

During the war years, building and construction in Canberra practically ceased. However, about June, 1944, a quota of 25 to 30 houses per quarter was allotted under the War Housing Programmes This programme commenced early in 1945. Of these houses, 59 were completed in the year 1945–46, including the erection of a residence for the Minister for Chile at Deakin and a house at Dickson Experimental Station. During the year 1945–46, the block known as Melbourne Buildings at Civic Centre was completed, providing additional office space and also accommodation for the Canberra University College. Other architectural works completed during 1945–46 included extensions to West Block ; provision of broadcasting control rooms in the Senate and House of Representatives at Parliament House ; alterations and renovations to Hotel Acton completing the re-conversion from office to hotel accommodation ; and the erection of a new building to accommodate the Prices Branch.

The following engineering works were completed :—One million gallon reinforced concrete reservoir to provide additional storage for the township of Queanbeyan ; construction of King's Avenue and Weir ; and the construction of Billabong Bridge. Sub-divisional street construction and the provision of water and sewerage mains were undertaken for additional sections in the suburbs of Griffith, Narrabundah, Turner and Ainslie

Electrical works carried out comprise the following :—A new high tension feeder to Ainslie and Duntroon areas to improve services and meet increased demands ; first stage of a 22 kv. supply to Cotter pumping station enabling the simultaneous use of large pumping units to meet increased summer consumption ; a new sub-station and underground supply for Melbourne Buildings ; the Parliamentary debate broadcasting system and speech amplification in the House of Representatives, Parliament House ; an internal radio communication system in the Canberra Community Hospital ; modern lighting and electrical heating installation in offices in Melbourne Building extensions ; installation of fluorescent lighting in the Government Printing Office ; extensive installation of fluorescent lighting andel ectrical equipment in the Governor-General's residence at Yarralumla ; and the provision of modern lighting, and a paging and sound amplifying system in the tuberculosis ward of the Canberra Community Hospital.

Mechanical engineering services include a heating and ventilation system in West Block and ventilation of the telephone exchange, East Block.

The following projects were amongst those still under construction at 30th June, 1946 :—The erection of 177 residence in various suburbs ; extensions to runways at Fairbairn Aerodrome ; provision of a heating system in the new Prices Building ; road construction and water supply, sewerage and stormwater drainage for additional sections in various suburbs ; and extension of high tension and low tension mains to new substations.

5. **Forestry.**—A considerable amount of reafforestation work has been undertaken and plantations have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have also been established in the Brindabella mountains.

The total area of plantations to 30th June, 1946, was 14,500 acres. Forestry operations were begun on Mount Stromlo in 1915, and up to 1925 approximately 700 acres had been planted with pine and other trees. The plantings up to this time were chiefly on aesthetic lines, but since the initiation of a wider programme, arrangements have been made for pruning and thinning, and sawmill timber is now being obtained from the logs resulting from thinning operations. The yearly output of sawmill logs from thinnings is gradually improving and has increased from 30,000 super. feet in 1930–31 to 2,000,000 super. feet in 1945–46.

In 1926 a comprehensive review was undertaken of the Territory's potentialities in regard to forest development. A system of forestry management was instituted in the existing forest areas, and a considerable amount of survey and assessment work has been completed. *Pinus radiata* has been most extensively planted, and also, as a result of experimental work, pinus areas of better quality pines on a longer rotation, such as *Pinus ponderosa* and *laricio*, have been planted during recent years, but *Pinus radiata* remains the principal species.

6. **Lands.**—(i) *General.* Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other pests. The lands are classified into three grades of agricultural and three grades of grazing land. Leases may be granted for grazing, fruitgrowing, horticulture, agriculture, residential, business, or other purposes for a period not exceeding 25 years. The annual rental is 4 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £10,000, exclusive of the value of buildings and fences thereon. About 292,510 acres comprising 466 leases and 12 grazing licences were held under lease and licence at 31st March, 1946, for periods varying from quarterly tenure to 25 years.

Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1936–38, and leases of other lands under the Leases Ordinance 1918–37. Land is also leased for various purposes in the City Area under the Church Lands Leases Ordinance 1924–32, and the Leases (Special Purposes) Ordinance 1925–43.

(ii) *City Leases.* The Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to 5 per cent. of the unimproved value of the land, which value is subject to re-appraisement at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within 6 months and completed within 12 months unless an extension of time is allowed.

Auction sales of city leaseholds are described in Official Year Book No. 22, p. 599.

Six leases under the Church Lands Leases Ordinance 1924–1932, which require the lessees to submit a definite building programme within a specified period, and one lease under the Church of England Lands Ordinance 1926 have been granted for church purposes. A further eight leases under the Leases (Special Purposes) Ordinance 1925–1943, one lease under the City Area Leases Ordinance 1936–1938, and two leases under the Leases Ordinance 1918–1937 have been granted for church and scholastic purposes.

The total number of leases granted under the City Area Leases Ordinance, excluding surrendered leases, at the end of the financial year 1946–47 was 741 representing a capital value of £285,167. During the year 68 new leases were granted. The number of business and residential blocks surrendered to or determined by the Commonwealth to the end of the year was 329.

Under the terms of the City Area Leases Ordinance 1936–1938 each block is leased for a period of 99 years at a rental of £5 per cent. per annum of the unimproved capital value as assessed by the Commonwealth or bid at auction. At present such rentals are subject to a 20 per cent. rebate.

(iii) *In the Jervis Bay Territory.* The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital. The Royal Australian Naval College was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. Leases have been granted over an area of 11,788 acres in the Jervis Bay Territory.

7. **Railways, etc.**—Canberra is connected at Queanbeyan with the railway system of New South Wales by a line 4¾ miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. The railway terminus is situated in the area known as Kingston.

A direct passenger service is in operation connecting Canberra with Sydney and Melbourne, and trains leave both cities for Canberra daily.

There are two companies operating air services each several times daily on the Melbourne–Canberra–Sydney route.

Regular motor-coach services link Canberra with New South Wales, Victoria and South Australia.

8. **Population.**—The census return of population on 30th June, 1938, was 11,290 in the Australian Capital Territory and 272 in the Jervis Bay Territory, or a total of 11,562 persons. The population at the census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area.

9. **Production.**—During 1945–46 the production of the more important items of the agricultural and pastoral industry was—Wheat, 38,631 bushels; wool, 1,960,000 lb.; butter, 3 tons; meat (bone-in-weight fresh), 1,132 tons. The numbers of live stock depastured at 31st March, 1946, were—Horses, 1,048; cattle, 7,867; sheep, 224,680; and pigs 619.

10. **Educational Facilities.**—Arrangements exist with the New South Wales Education Department for the administration of education up to and including the secondary stage in the Territory, the expenditure involved being refunded annually to the State. There are nine schools in the Australian Capital Territory and two in the Jervis Bay Territory. The largest school is situated at Telopea Park, Barton, with accommodation for 800 scholars. Secondary education is provided at the Canberra High School, Acton, and the Telopea Park Central School has a secondary department. The High School has accommodation for 550 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the Government High Schools in New South Wales. The School also provides for commercial and junior technical classes, and there is an Evening Youth College attached, with commercial, matriculation and other classes.

The Canberra Technical College at Kingston is provided with modern equipment for supplementary courses for apprentices, journeymen desirous of improving their trade qualifications, and for others who desire to take any special courses. Provision is also made for the training of ex-service personnel under the Commonwealth Reconstruction Scheme.

The Canberra Nursery School, Acton, established in 1944, provides for the training of children between the ages of 3 and 5 years.

A pre-school centre at Reid provides modified nursery school facilities for children between the ages of 3 and 5 years from that suburb. Additional centres of this type are to be established in other areas.

There are at present four private schools in the Territory. The Canberra Grammar School, the Canberra Church of England Girls' Grammar School, and St. Christopher's Convent School provide for sub-primary, primary and secondary education, and St. Patrick's School provides sub-primary and primary education.

Reference to the establishment of the Canberra University College will be found in Chapter VI. "Education".

11. **Finance.**—(i) *Financial Year* 1945–46. Receipts and expenditure for the financial year 1945–46 are given in the following table :—

AUSTRALIAN CAPITAL TERRITORY : RECEIPTS AND EXPENDITURE, 1945–46.

Receipts.		Expenditure.				
Items.	Amount.	Items.	New Works, etc.	Repairs and Maintenance.	Other.	Total.
	£		£	£	£	£
Rents and rates ..	223,872	Architectural services ..	200,053	52,048	..	252,101
Electricity	86,136	Engineering services ..	83,047	123,827	..	206,874
Motor registration ..	12,769	Forestry	6,979	..	19,708	26,687
Water charges ..	14,203	Parks and Gardens ..	..	58,271	..	58,271
Interest	12,503	Loans for housing, net ..	*Cr.*8,364	..	..	*Cr.*8,364
Miscellaneous ..	42,481	Sundry works and services ..	5,587	1,668	..	7,255
Total ..	391,964	Buildings and engineering services for Health Department	12,351	..	..	12,351
		Plant, etc.—				
Trust Funds—		Works	22,900	..	..	22,900
Hotels	47,443	Transport	26,550	..	..	26,550
Transport ..	200,680	Education	..	..	70,720	70,720
Canberra Officers' Homes, Melbourne	8	Hospital	..	..	31,100	31,100
Works Suspense Account	863	Administrative	..	..	121,072	121,072
Interior Services Trust Account ..	51,340	Interest and Sinking Fund ..	..	..	278,623	278,623
Allied Works—Plant and Materials Account	321,923	Other Services	..	..	74,252	74,252
Cemetery ..	1,872	Total	349,103	235,814	595,475	1,180,392
Housing	16,634	Trust Funds—				
Total ..	640,763	Hotels	..	..	46,527	46,527
		Transport	..	..	162,250	162,250
		Works Suspense Account ..	..	..	58,618	58,618
		Interior Services Trust Account	..	..	18,115	18,115
		Allied Works—Plant and Materials Account ..	..	..	340,116	340,116
		Cemetery	..	..	1,063	1,063
		Housing	..	..	10,516	10,516
		Total	..	..	637,205	637,205
Aggregate Receipts	1,032,727	Aggregate Expenditure ..	349,103	235,814	1,232,680	1,817,597

The aggregate receipts for 1944–45 were £860,732 and expenditure was £1,426,998. Details will be found on p. 28 of *Finance Bulletin* No. 36, 1944–45.

(ii) *From* 1901–2 *to* 30*th June*, 1946.—The total receipts and expenditure from 1901–2 to 30th June, 1946, were as follows :—

AUSTRALIAN CAPITAL TERRITORY : RECEIPTS AND EXPENDITURE TO 30th JUNE, 1946.

Receipts.	£	Expenditure.	£
Commonwealth Treasury—		Lands	912,308
Parliamentary Appropriations—		Engineering works	5,411,964
Revenue	8,804,181	Architectural works	4,176,026
Loan	5,776,023	Other capital expenditure, sundry debtors' etc.	1,582,182
			12,082,480
		Seat of Government Establishment Account, being maintenance and administration less revenue : expenditure of a capital nature for which assets not longer exist ; profit and loss accounts of trading activities, etc.	*2,497,724
Total Receipts	14,580,204	Net Expenditure	14,580,204

* Excludes interest £4,559,699 net.

The foregoing table was prepared by the Department of the Interior and excludes part cost of national buildings (Parliament House, the secretariats, etc.), federal highways within the Territory, the Queanbeyan–Canberra Railway, the housing loan, etc., and loans for housing—£2,262,366.

NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3′ 45″ South, longitude 167° 56′ 29″ East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from Auckland, 630 miles. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 49° and 85° F. with a mean of 68° F. The average annual rainfall is 52 inches. It has been said that the salubrious climate, coupled with the beauty of its landscapes and seascapes, should render Norfolk Island "the Madeira of the Pacific". Before the war the island was visited annually by a number of tourists. With the return of improved shipping facilities and the inauguration of direct air services from Australia and New Zealand, this traffic is again rapidly increasing.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbering 94 males and 100 females were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943.

3. **Administration.**—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally by the passage of the Norfolk Island Act 1913 it was accepted by the Federal Parliament as a territory of Australia. From July, 1914 until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but is now administered by the Department of External Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of an Advisory Council of eight elected members to advise the Administrator.

4. **Population.**—The population as disclosed by the Census at 30th June, 1947, was 938 consisting of 505 males and 433 females. During 1946–47, 14 births, 14 deaths, and 9 marriages were recorded. The average age of the persons who died was 58 years. Arrivals to the island exceeded departures by 117, the respective figures being arrivals 829, departures 712.

5. **Live Stock.**—The latest returns of live stock show that at 30th June, 1947, there were on the island 1,464 cattle, 527 horses, 327 sheep and 25 pigs. In addition, there were 5,369 head of poultry.

6. **Production, Trade, etc.**—The soil throughout is good and is specially suitable for the cultivation of bananas, citrus and other fruits. The Hawkesbury Wonder bean seed is one of the staple crops of the island. Since the promulgation of the Ordinance regulating the export of seed the area planted with bean seed has increased. Of the 1946–47 crop, 1,087 bushels were exported, the net return to growers being £3,022.

Apart from the bean, agriculture generally has been depressed. A modern pulping factory was erected on the island during 1938 but whilst 82 tons of passion fruit pulp were produced during 1939–40, the quantity of pulp produced during 1946–47 amounted only to about 5½ tons. The pulping of cherry guavas for jelly has also been experimented with and investigations carried out with a view to cultivating flax and ramie.

The citrus trees in full bearing on the island are capable of producing over 3,000 cases of fruit, but owing to a lack of marketing facilities, production has been retarded. Lemon and orange juice sold readily, the combined value of these two items of export during 1946–47 amounted to £460. Lemon seed exported during the year was valued at £86.

Large numbers of whales pass the island throughout the season. However, whaling had not been conducted for a number of years until 1939, when the industry was revived by the formation of a whaling company. The preserved fish industry which was established some years ago has met with a number of setbacks but several consignments of frozen fish valued at £325 were exported to Australia during 1946-47.

On 30th June, 1947, the total area of land held under freehold and Crown leasehold amounted to 6,325 acres, consisting of 4,169 acres freehold and 2,156 leasehold.

Imports and exports for the six years 1938–39 and 1942–43 to 1946–47 are given hereunder ; the values are expressed in Australian currency :—

NORFOLK ISLAND : IMPORTS AND EXPORTS.

Country.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
IMPORTS.						
From—	£	£	£	£	£	£
Australia	27,427	20,256	23,412	28,128	29,938	50,195
New Zealand ..	..	..	..	133	2,273	22,368
Pacific Islands ..	163	..	62	..	191	1,476
Total	27,590	20,256	23,474	28,261	32,402	74,039
EXPORTS.						
To—	£	£	£	£	£	£
Australia	16,110	3,866	4,006	6,133	8,886	12,695
New Zealand ..	623	..	..	6	..	361
Pacific Islands ..	237	..	41	438	138	461
Total	16,970	3,866	4,047	6,577	9,024	13,517

Duties of Customs are levied on the following goods imported into Norfolk Island for home consumption :—

IMPORT DUTIES SCHEDULE.

Article.	Unit.	Rate of Duty.		Article.	Unit.	Rate of Duty.	
		s.	d.			s.	d.
Spirits	pr. gal.	30	0	Chicory	lb.	0	3
Ale, beer, porter and				Petroleum, etc. ..	gal.	0	3
cider	gal.	2	6	Kerosene, etc. ..	,,	0	3
Wine, still—				Residual oil, etc. ..	,,	0	3
Australian ..	,,	5	0	Oil, n.e.i.	,,	0	3
Other	,,	10	0	Lubricating oils ..	,,	0	3
Wine, sparkling—				Sugar	cwt.	3	0
Australian ..	,,	15	0	Molasses, etc. ..	,,	2	0
Other	,,	25	0	Biscuits	lb.	0	1
Tobacco, manufactured				Candles	,,	0	1
or unmanufactured—				Confectionery ..	,,	0	3
Australian leaf ..	lb.	2	0	Dried fruits—			
Other leaf ..	,,	4	0	Australian ..	,,	0	1
Cigars and cigarettes ..	,,	6	0	Other	,,	0	3
Tea	,,	0	3	Jams, jellies and pre-			
Coffee	,,	0	3	serves	,,	0	1

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (*a*) the produce or manufacture of Norfolk Island ; (*b*) shipped direct to Australia ; and (*c*) not goods which if manufactured or produced in Australia would be subject to excise duty.

7. **Communication.**—The "all-red" cable from Great Britain via Vancouver, Fanning Island and Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane.

A shipping service to the Territory is maintained by vessels of Burns Philp & Co. Ltd. Sydney, under the terms of the contract with the Commonwealth Government for the maintenance of shipping services to the Pacific Islands. The journey from Sydney to Norfolk Island occupies four days.

The construction of an aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island is maintained by Qantas Empire Airways Ltd., and regular air services are also in operation from New Zealand.

Until 10th June, 1947, the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

8. **Social Condition.**—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry and hat making. The headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1947, was 125.

The Court of Norfolk Island presided over by a Chief Magistrate is a court of record with dual jurisdiction. Sitting in its Limited Jurisdiction the Court has power to hear and determine actions of claims not exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its Full Jurisdiction the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sittings in its Limited Jurisdiction, and has authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its Full Jurisdiction.

9. **Finances.**—The whole of the Territorial revenue together with an annual grant from the Commonwealth Government in aid of the administrative expenses is paid to the credit of the Norfolk Island Trust Fund Account, and all administrative and developmental expenses are paid from that account. The operations for 1946–47 were as follows :—

NORFOLK ISLAND TRUST FUND ACCOUNT, 1946–47.

Items.	Receipts.	Items.	Expenditure.
	£		£
Balance brought forward	12,369	Salaries	8,141
Commonwealth grant	4,000	Purchase of liquor	4,536
Commonwealth grant for land resumptions	3,679	Repairs and maintenance, etc.	1,626
Customs duties	3,911	Aerodrome compensation ..	3,701
Sale of liquor	7,792	Miscellaneous	12,619
Miscellaneous	22,873	Balance	24,001
Total	54,624	Total	54,624

PAPUA AND NEW GUINEA.

Provisional Administration.

Following the outbreak of the Pacific War civil administration in Papua and New Guinea was suspended on 11th February, 1942, and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. During the period of military control matters relating to the former civil administration were dealt with by the Department of External Territories Canberra. The Minister for External Territories was empowered by National Security Regulations to exercise the powers and functions of the Administrator, officers, and authorities of the territories, and jurisdiction of the Supreme Courts of Papua and New Guinea was vested in the Supreme Court of the Australian Capital Territory.

Pursuant to the provisions of the Papua–New Guinea Provisional Administration Act 1945, a single Provisional Administration Service was formed to take over from the military authorities in the Territories of Papua and New Guinea. Colonel J. K. Murray was appointed Administrator of the combined Territories on 11th October, 1945, and the transfer from military to civil control in Papua and the portion of the Territory of New Guinea south of the Markham River was effected on 30th October, 1945. Jurisdiction of the Supreme Courts of Papua and New Guinea was then vested in the Supreme Court of the Territory of Papua-New Guinea. As circumstances permitted, civil control was extended to other areas until the whole of the Territory of New Guinea came under control of the Provisional Administration of Papua-New Guinea on 24th June, 1946

PAPUA.

§ 1. General Description.

1. **Early Administration.**—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the

Commonwealth by the Papua Act 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is now under the control of the Commonwealth, but not included within it, and is divided into magisterial districts.

Prior to an amendment made in 1940, the Papua Act provided for the appointment of a Lieutenant-Governor to administer the Territory. The office of Lieutenant-Governor was held by Sir Hubert Murray, K.C.M.G., from 1909 until his death in February, 1940. The amendment referred to provided for the control of the Territory by an Administrator.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude ; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 800 miles ; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (see No. 18, p. 633).

§ 2. Population.

The white population of Papua at the Census of 30th June, 1947, was 2,542, made up of 1,700 males and 842 females. The numbers recorded in earlier years were :—1937, 1,323 ; 1938, 1,488 ; 1939, 1,608 ; 1940, 1,822 ; and 1941, 3,070.

It is not possible to give exact data regarding the number of natives, because a large area of the interior has not as yet been under complete Government control. The official estimate is 300,000. Such censuses of the native population as have been taken during recent years point to a slight increase. The coloured population, other than Papuans, on 30th June, 1947, was 194. On the same date, half-castes, with one of the parents a European, were 503. An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Administrator to persons of special skill required for employment as overseers or foremen.

§ 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—Information regarding the conditions connected with the employment of native labour in 1928 will be found in Official Year Book No. 22, p. 607.

The existing laws relating to native labour are uniform in Papua and New Guinea, and are contained in the Native Labour Ordinance 1946 of the Territory of Papua-New Guinea and in the regulations made thereunder. Employers may recruit personally or by associations of employers or by salaried persons in the regular employment of those employers or associations. The administration determines the numbers that may leave a village for employment and the number that may be employed by each employer. Service on the part of the native is voluntary and he must be justly treated, properly housed and fed and given adequate medical attention when necessary. Natives under 16 years may not be employed and a minimum monthly wage (15s.) and working week (44 hours) are prescribed. Employment under contract is limited to a maximum of 12 months and re-engagement is not permitted until the native has been returned to his village for a period of three months. Employers must repatriate native employees on termination of their contracts. Provision also exists for compensation for injury or death arising out of employment.

The number of natives engaged under contract of service on 31st March, 1947, was 7,575. In addition there were 2,246 non-indentured employees.

2. **Native Taxes.**—Under the Native Taxes Ordinance, 1917–1936, a tax not exceeding £1 per annum may be imposed on natives, except native constables, mission teachers and mission students, natives unfit for work, and those who have four living children. The proceeds of the tax must be expended on native education, or devoted to purposes directly benefiting the natives.

The taxes collected in 1940–41 amounted to £16,761, of which £5,904 was transferred to the Native Education Fund, and £8,474 to the Native Benefits Fund. The Native Education Fund during 1940–41 disbursed to primary and technical education £4,036, and to agricultural education £1,262, leaving a credit balance of £26,200. From the Benefits Fund the expenditure included :—Anthropology, £838 ; health, £6,309 ; village improvements, £94 ; family bonus, £1,720 ; games in villages, £12 ; and clerical expenses, £25.

3. **Care of Half-caste Children.**—An Ordinance was passed in 1922 to provide for the care and maintenance of neglected half-caste children. The Ordinance provides that a sum of £26 per annum shall be paid to the Commissioner for Native Affairs by the adjudged father of the child until the child, if a boy, shall reach the age of 16 years, or, if a girl, 18 years.

4. **Health.**—The two principal native hospitals are in Port Moresby and Samarai ; but minor hospitals are attached to the out-stations. Hospitals are also conducted by the various mission societies and plantation companies. The mission societies employ a number of doctors and trained nurses. European medical assistants are employed by the Government. A training school has been established for the purpose of training natives in first-aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as native medical assistants. Arrangements have also been made for students to attend the Native Medical Practitioners' School at Fiji The chief complaints treated are malaria, yaws, ulcers, lung affections, hookworm, venereal and skin diseases. The death rate amongst native labourers was 2.7 per cent. in 1940–41.

§ 4. Land Tenure.

1. **Method of Obtaining Land.**—The broad principles upon which the land laws of Papua are based are (*a*) no land can be alienated in fee simple ; (*b*) the rental of the land leased is assessed on the unimproved value of the land, and is subject to re-appraisement at fixed periods. The terms upon which land may be leased are very liberal. Leaseholds of the best class of agricultural land may be obtained for 99 years. No rent is payable during the first ten years of the lease on areas less than 1,000 acres. During the following ten years the rent is charged at the rate of 5 per cent. on the unimproved value of the land. The unimproved value of the land is appraised every twenty years and the rent determined accordingly. If on any appraisement the rent is raised by more than one-third the lessee may disclaim the lease and shall be entitled to receive compensation for his improvements. The unimproved value of agricultural land has been fixed at 5s. per acre. Rent is immediately payable on areas exceeding 1,000 acres, and survey fees on areas exceeding 100 acres.

2. **Crown Lands.**—Private sales of native-owned land in the Territory have now ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans. The amount of Crown Land purchased from the natives in 1940–41 was 12,177 acres, and the total to 30th June, 1941, 1,787,783 acres. The tenures under which surveyed areas were held at 30th June, 1941, were leasehold 200,303 acres, and freehold 23,490 acres. The area of leases granted during 1940–41 for agricultural purposes was 9,834 acres most of which was intended for rubber plantations. The low price of copra and the more favorable prospects of rubber had diverted attention to the latter culture. At 31st December, 1941, more than 80,000 acres were held under leases for the cultivation of rubber. Crown rents on leaseholds for 1941 amounted to £7,317.

§ 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, timber, fishing, mining and manufacturing industries. Gold is the principal mineral mined, and rubber and copra are the most important amongst plantation products. Portions of the Territory appear well suited for cotton cultivation, and there is a possibility of obtaining petroleum in marketable quantities. Bounties are paid by the Commonwealth Government on cocoa beans and shells, hemp and coir, sago, vanilla beans, bamboos and rattans, spices and kapok, produced in the Territory and exported direct to Australia for home consumption.

2. **Agriculture.**—(i) *Soil and Rainfall.* Rich soils at varying elevations and heavy and evenly distributed rainfall favour the cultivation of a variety of tropical products including sugar-cane, coco-nuts, sago palm, bread fruit, dyewoods, spices, ginger, nutmegs, bananas and other fruits. There are large areas of rich alluvial and volcanic soils along the coast, and fertile land is found at elevations up to 6,000 feet. Heavy rainfalls occur, except over a belt of country which runs back from the coast to the hills, and which has its dry season from May to November. This "dry" area is admirably suited for the production of tobacco, fibres, cotton, etc.

(ii) *Plantations.* Agricultural settlement has been mostly in the Central and Eastern Divisions with coco-nuts and rubber as the principal crops. The natives are compelled by an Ordinance to plant coco-nuts for food supply. In addition to the coco-nuts in these plantations, many more are planted over small and widely scattered areas by the older natives in accordance with custom. The Native Plantations Ordinance provides for the establishment of plantations in which half of the proceeds is paid to the natives entitled thereto, and the remaining half paid into the Native Education Fund. The following table shows the areas under the different crops during the five years 1936 to 1940:—

AREA UNDER CULTIVATION.

Crop.	1936.	1937.	1938.	1939.	1940.
	Acres.	Acres.	Acres.	Acres.	Acres.
Coco-nuts	48,188	45,207	44,719	44,527	44,583
Rubber	10,270	10,956	12,809	14,494	18,262
Sisal hemp	150	150	700	700	..
Kapok	168	119	84	92	85
Coffee	368	271	248	190	84
Other	801	933	664	554	595
Total	59,945	57,636	59,224	60,557	63,609

At 30th June, 1940, the London market price for hot-air dried copra was £13 5s. per ton as compared with £11 7s. 6d. at 30th June, 1939. Rubber at the later date was 13½d. per lb. compared with 8d. per lb. on 30th June, 1939.

(iii) *Government Plantations.* There are five Government plantations, the Orangerie Bay and Kikori coco-nut plantations and the Gobaregere, Cupola and Kokoda rubber plantations.

3. **Forestry.**—The principal softwood timber is known as "ilimo," while among satisfactory timbers of the lowlands are "nara," "medobi," and "melila." There are a large number of woods, varying from the softest to the hardest, including beautiful cabinet woods, but research is necessary to determine their usefulness. The development of a coniferous belt at the higher altitudes offers great possibilities. It is believed that teak and sandalwood are well suited for cultivation.

4. **Live Stock.**—At 31st December, 1940, the live stock in the Territory consisted of 587 horses, 5,994 head of cattle, 87 mules, 1,244 goats, 665 pigs, 30 sheep and 6,320 fowls. The introduction of rabbits, foxes, hares and monkeys is prohibited.

5. **Fisheries.**—Pearl-shell fishing occupies an important place in the industries of Papua. In 1941 considerable numbers of luggers were licensed, but the returns were mostly credited to Queensland, whose boundary approaches to within a few miles of the Papuan coast. The species of tortoise which supplies the commercial tortoise-shell is also a native of Papua. Bêche-de-mer and trochus are found along the shores and reefs and form valuable articles of export.

6. **Mining.**—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, lignite, platinum and petroleum.

The existence of petroleum has been traced at scattered intervals over a large area. Three companies hold permits under the provisions of the Petroleum (Prospecting and Mining) Ordinance 1938–1939 and oil prospecting has been carried on in the Western, Delta, Gulf and Central Divisions.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

(ii) *Gold.* Gold was discovered in 1888 and the search gradually spread over every division, finds being reported wherever the explorers went. The estimated quantity in fine ounces and the value of the gold yield for the five years 1936–37 to 1940–41 are given below :

PAPUA : GOLD YIELD.(a)

1936–37.		1937–38.		1938–39.		1939–40.		1940–41.(b)	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Fine oz.	£	Fine oz.	£	Fine oz.	£	Fine oz.	£	Fine oz.	£
21,605	187,975	25,835	223,160	35,808	325,116	30,422	316,203	10,348	110,501

(a) Valued at average price realized for fine gold in Australia. (b) Nine months ended March 1941.

Most of the rivers, except those flowing into the Gulf of Papua, have been declared open to gold dredging, and good yields have been obtained. The total value of gold won to 31st March, 1941, was £3,269,021.

(iii) *Copper.* Copper matte to the value of £5,999 was exported during 1940–41. The principal value of this item is its gold content.

(iv) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River.

A mineral laboratory and museum have been fitted up, and are available to prospectors and others interested.

7. **Water Power.**—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10,000,000 h.p. available for this purpose.

§ 6. Trade and Shipping.

1. **Customs Tariff.**—In the Schedule to the Customs Tariff of Papua 136 items are mentioned, of which approximately one-third is on the free list, consisting of a number of foodstuffs and certain manufactures for use in the development of the Territory or its industries. Where duties are imposed they are generally on a 10 per cent. ad valorem basis, with the exception of ale, spirits, beverages and tobacco on which high revenue rates are imposed. Preference is given to Australian wines. On 16th July, 1931, a primage duty of 4 per cent. ad valorem was imposed on all goods, whether dutiable or not, in addition to the ordinary customs dues ; the rate was subsequently reduced to 2½ per cent. and the duty ceased to operate on 1st July, 1937. From 12th July, 1940,

the duty has been re-imposed, but certain specified articles have been exempted. The value of imports into Papua during 1940–41 was £539,152 and the duty collected, £63,116. The duty collected in 1939–40 was £64,611.

In 1940–41, £4,255 was received in export duties which are levied on pearl-shell gold and copra, in the latter case only on the excess above £20 per ton of a certain declared value deemed to be the London market price.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported direct from Papua (see Chapter XI. "Trade"), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—Tables of imports and exports during the years 1936–37 to 1940–41 are given below. The values of exports are expressed in Australian currency but it is not possible to determine accurately the currency of the £ in the table of imports.

PAPUA : IMPORTS AND EXPORTS.

Particulars.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
	IMPORTS.				
	£	£	£	£	£
Ale, spirits and beverages ..	11,362	14,453	14,818	19,544	24,922
Tobacco and manufactures ..	25,637	24,213	27,466	31,669	31,874
Agricultural products and groceries	114,621	143,937	138,551	156,560	160,345
Textiles, felts, furs, attire, etc. ..	40,987	45,492	37,712	55,388	46,883
Metals and machinery	98,875	124,277	76,068	306,937	80,294
Oils, paints and varnishes ..	27,519	37,139	33,331	44,141	37,437
Earthenware, cement, glass, etc.	5,078	6,969	5,585	7,069	7,939
Drugs and chemicals	9,596	12,904	12,828	17,630	16,904
Wood, wicker and cane ..	7,620	14,918	13,076	8,400	9,039
Jewellery and fancy goods ..	9,171	9,495	7,756	8,075	7,443
Leather and rubber	6,288	6,748	8,076	11,154	8,996
Paper and stationery	6,317	8,569	8,521	8,218	8,237
Miscellaneous	58,633	126,479	94,273	79,128	53,516
Government stores	30,352	55,904	36.747	72,499	45,323
Total	452,056	631,497	514,808	826,412	539,152
	EXPORTS.				
	£	£	£	£	£
Bêche-de-mer	3,939	1,363	2,506	1,024	1,202
Coco-nut, desiccated	47,137	52,628	48,140	58,015	59,523
Coffee beans	7,536	6,606	6,911	5,289	5,754
Copra	191,808	91,166	57,999	45,568	59,062
Gold	91,775	109,738	152,103	139,621	133,341
Pearls	1,966	2,400	15	..	6,000
Rubber	124,174	129,448	114,949	152,487	172,099
Trochus shell	12,581	8,578	9,200	9,312	1,680
Other	43,085	33,666	98,335	99,356	54,114
Total	524,001	435,593	490,158	510,672	492,775

The trade of the Territory reached its maximum in 1939–40, exceeding by £180,414 the previous highest figure which was established in 1925–26 when imports were valued at £470,774 and exports at £685.896. Prices for both copra and rubber were high about 1925–26 and the copper-mines were producing freely.

3. **Direction of Trade.**—Particulars of the countries of origin of the imports into Papua and of destination of the goods shipped therefrom are shown below for the three years ended 1940–41.

PAPUA : DIRECTION OF TRADE.

Country.	Imports.			Exports.		
	1938–39.	1939–40.	1940–41.	1938–39.	1939–40.	1940–41.
	£	£	£	£	£	£
Australia	239,105	319,431	298,848	409,408	456,120	453,504
United Kingdom ..	56,699	88,354	51,732	25,840	12,454	16,764
Other British Countries	45,313	28,505	49,454	17,630	8,359	8,453
Europe	23,966	14,864	5,414	11,024	11,118	..
Japan	14,858	18,937	24,821	7,582	4,237	7,718
Asia, excluding Japan	38,960	42,563	15,414	2,425	252	1,279
Dutch East Indies and Philippine Islands ..	21,288	24,188	29,278	11,519	10,948	4,744
U.S. of America ..	73,446	288,224	64,137	576	5,077	313
America, Other ..	1,173	1,346	54	..	2,107	..
Morocco	..	..	..	4,154	..	..
Total ..	514,808	826,412	539,152	490,158	510,672	492,775

4. **Shipping.**—The following table shows the number and tonnage of oversea vessels entered and cleared at ports during the five years ended 1940–41. Of the vessels recorded in 1940–41, 166 were of British nationality.

PAPUA : OVERSEA SHIPPING.

Year.	Vessels.	Tonnage.
1936–37	181	356,476
1937–38	243	482,981
1938–39	215	461,199
1939–40	227	489,970
1940–41	217	489,469

NOTE.—The figures above exclude ships of war and Government vessels.

§ 7. Finance.

The revenue and expenditure of Papua for the five years 1936–37 to 1940–41 were as follows :—

PAPUA : REVENUE AND EXPENDITURE.

Particulars.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
Revenue—	£	£	£	£	£
Customs	57,443	58,539	54,606	64,874	77,359
Commonwealth Grant ..	42,500	42,500	42,500	42,500	42,500
Lands	6,530	6,709	6,013	7,112	7,700
Fees, fines, etc. ..	6,148	7,065	9,501	9,554	10,050
Other	(*a*) 59,170	67,995	53,203	53,878	51,909
Total	171,791	182,808	165,823	177,918	189,518
Expenditure—					
Medical	16,718	20,884	22,075	20,785	24,718
Ordinary Votes ..	(*b*) 127,926	122,536	116,275	127,455	132,633
Public Works	23,503	35,828	25,458	26,966	29,886
Native Affairs	2,773	3,854	2,522	2,726	1,763
Total	170,920	183,102	166,330	177,932	189,000

(*a*) Includes Commonwealth grant to rubber growers of £6,871. (*b*) Includes expenditure of Commonwealth special grant.

The table above and that on page 365 give separate particulars of the respective territories. Following the institution of the new provisional administration particulars of finance relate to both territories. In order to provide a comparison with 1945–46, combined particulars are also shown below for the years 1937–38 to 1940–41. The figures include the transactions of the following accounts :—Trust Territory of New Guinea—Consolidated Revenue Account ; Papua—Public Revenue Account, Native Tax Account, Native Education Fund and Native Benefits Fund. Figures for 1945–46 relate to Civil Administration only. The last three funds are not included in the table above.

TERRITORIES OF PAPUA AND NEW GUINEA : REVENUE AND EXPENDITURE.

Particulars.	1937–38.	1938–39.	1939–40.	1940–41.	1945–46.
Revenue—	£	£	£	£	£
Taxation—					
Customs Duties	290,839	257,460	259,688	225,749	50,533
Stamp Duties	6,542	7,061	6,581	4,590	261
Native Head Taxes ..	35,115	38,461	34,831	38,515	..
Licences	15,321	15,185	14,266	11,683	741
Other Taxes	9,321	7,370	5,971	4,664	..
Commonwealth Grants ..	42,500	42,500	(a)69,500	(a)81,000	252,740
Post Office	75,337	40,548	29,967	25,025	6,618
Lands	22,887	24,429	22,393	24,057	107
Mining—					
Royalty on Gold (*b*) ..	97,464	107,974	143,906	119,792	..
Other	22,082	18,682	15,164	13,533	540
Harbour Dues, Wharfage, etc.	20,439	16,930	18,209	14,596	..
Fees, Fines and Forfeitures, n.e.i.	8,319	11,122	11,345	11,570	1,958
Electric Light and Power Supply, Papua	5,248	6,094	7,191	8,201	..
Other Revenue	49,620	48,351	47,996	45,401	4,664
Total	701,034	642,167	687,008	628,376	318,162
Expenditure—					
Public Debt Charges—					
Interest (*b*)	755	720	684	647	..
Provision for Redemption of Debt (*b*)	7,864	7,899	7,451	972	..
Post Office	(*c*) 7,917	(*c*) 8,875	(*c*) 17,723	(*c*) 15,883	10,986
Social Expenditure—					
Education	10,995	12,904	13,348	12,141	3,090
Public Health Services, Hospitals, etc.	102,628	113,571	107,199	106,267	32,905
Law, Order and Public Safety	129,571	147,365	137,890	124,613	23,502
Native Welfare n.e.i. (*d*) ..	89,253	83,203	95,890	80,426	13,663
Grants to Missions for Education and Medical Services	5,496	4,865	5,001	5,440	8,476
New Works, Buildings, etc. ..	(*b*)70,011	(*b*)69,145	(*b*)63,257	(*b*)48,500	21,674
Other Public Works and Services	63,325	57,422	49,692	43,510	38,426
Electric Light and Power, Papua	3,457	2,837	5,370	9,107	..
Legislative, General Administration and Other Expenditure	211,536	170,896	186,929	185,450	147,655
Total ..	702,808	679,702	690,434	632,965	300,437

(*a*) Includes payments, by Commonwealth to Trust Territory of New Guinea, of collections under Gold Tax Act 1939 on gold produced in New Guinea—1939–40, £27,000 and 1940–41, £38,500. (*b*) Trust Territory of New Guinea only. (*c*) Excludes salaries in Trust Territory of New Guinea. These are included under General Administration. (*d*) Expenditure on Native Welfare not included under other headings.

§ 8. Progress of Papua.

The following table indicates the progress made from 1st September, 1906, when the Territory was placed under Australian control, to 30th June, 1941 :—

PAPUA : STATISTICAL SUMMARY.

Items.		Year ended 30th June—			
		1907.	1939.	1940.	1941.
White population	No.	690	1,608	1,822	3,070
Native labourers employed ..	,,	2,000	19,733	20,352	20,068
Territorial revenue	£	21,813	123,323	135,418	147,018
,, expenditure ..	£	45,335	166,330	177,932	189,000
Value of imports	£	87,776	514,808	826,412	539,152
,, exports	£	63,756	490,158	510,672	492,775
Area of plantations ..	acres	1,467	59,224	60,557	63,609
Meteorological stations established	No.	3	21	21	21
Gold yield..	fine oz.	12,439	35,808	30,422	(*a*) 10,348

(*a*) Nine months ended March, 1941.

TRUST TERRITORY OF NEW GUINEA.

§ 1. General Description.

The land area of the Territory of New Guinea is about 93,000 square miles and the area including the sea within the lines drawn through its extreme outer points is more than 1,000,000 square miles. As the coast of the Territory has not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands together with the small islands adjacent thereto are as follows :—

AREA OF TERRITORY OF NEW GUINEA.

Particulars.		Approximate Area.
		Sq. miles.
North-East New Guinea (also called " The Mainland ") ..		69,700
Bismarck Archipelago—		
New Britain	14,600	
New Ireland	3,340	
Lavongai	460	
Admiralty Islands	800	19,200
Solomon Islands—		
Bougainville	3,880	
Buka	220	4,100
Total		93,000

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613, and in the *Official Handbook of the Territory.*

§ 2. Government.

1. **The Military Occupation (1914–18 War).**—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government in May, 1921.

2. **1939–45 War.**—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, see p. 345 *ante*.

3. **Mandate (1920).**—In 1919 it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, delayed, and it was not until 17th December, 1920, that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 33 (see p. 264).

4. **Trusteeship (1946).**—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are as follows :—

> *Preamble* : The Territory of New Guinea has been administered in accordance with Article 22 of the Covenant of the League of Nations and in pursuance of a Mandate conferred upon His Britannic Majesty and exercised on his behalf by the Government of the Commonwealth of Australia.
>
> The Charter of the United Nations, signed at San Francisco on 26th June, 1945, provides by Article 75 for the establishment of an international trusteeship system for the administration and supervision of such territories as may be placed thereunder by subsequent individual agreements.
>
> The Government of Australia now undertakes to place the Territory of New Guinea under the trusteeship system, on the terms set forth in the present Trusteeship Agreement.
>
> Therefore, the General Assembly of the United Nations, acting in pursuance of Article 85 of the Charter, approves the following terms of trusteeship for the Territory of New Guinea in substitution for the terms of the Mandate under which the Territory has been administered :—
>
> *Article* 1. The Territory to which this trusteeship agreement applies (hereinafter called the Territory) consists of that portion of the island of New Guinea and the groups of islands administered therewith under the Mandate dated 17th December, 1920, conferred upon His Britannic Majesty and exercised by the Government of Australia.
>
> *Article* 2. The Government of Australia (hereinafter called the Administering Authority) is hereby designated as the sole authority which will exercise the administration of the Territory.
>
> *Article* 3. The Administering Authority undertakes to administer the Territory in accordance with the provisions of the Charter and in such a manner as to achieve in the Territory the basic objectives of the international trusteeship system, which are set forth in Article 76 of the Charter.
>
> *Article* 4. The Administering Authority will be responsible for the peace, order, good government and defence of the Territory and for this purpose will have the same powers of legislation, administration and jurisdiction in and over the Territory as if it were an integral part of Australia, and will be entitled to apply to the Territory, subject to such modifications as its deems desirable, such laws of the Commonwealth of Australia as it deems appropriate to the needs and conditions of the Territory.

Article 5. It is agreed that the Administering Authority, in the exercise of its powers under Article 4, will be at liberty to bring the Territory into a customs, fiscal or administrative union or federation with other dependent territories under its jurisdiction or control, and to establish common services between the Territory and any or all of these territories, if (in its opinion) it would be in the interests of the Territory and not inconsistent with the basic objectives of the trusteeship system to do so.

Article 6. The Administering Authority further undertakes to apply in the Territory the provisions of such international agreements and such recommendations of the specialized agencies referred to in Article 57 of the Charter as are, in the opinion of the Administering Authority, suited to the needs and conditions of the Territory and conducive to the achievement of the basic objectives of the trusteeship system.

Article 7. The Administering Authority may take all measures in the Territory which it considers desirable to provide for the defence of the Territory and for the maintenance of international peace and security.

Article 8. The Administering Authority undertakes that in the discharge of its obligations under Article 3 of this agreement—

1. It will co-operate with the Trusteeship Council in the discharge of all the Council's functions under Articles 87 and 88 of the Charter.
2. It will, in accordance with its established policy—
    - (*a*) take into consideration the customs and usages of the inhabitants of New Guinea and respect the rights and safeguard the interests both present and future of the indigenous inhabitants of the Territory and, in particular, ensure that no rights over native land in favour of any person not an indigenous inhabitant of New Guinea may be created or transferred except with the consent of the competent public authority ;
    - (*b*) promote, as may be appropriate to the circumstances of the Territory, the educational and cultural advancement of the inhabitants ;
    - (*c*) assure to the inhabitants of the Territory, as may be appropriate to the particular circumstances of the Territory and its peoples, a progressively increasing share in the administrative and other services of the Territory ;
    - (*d*) guarantee to the inhabitants of the Territory, subject only to the requirements of public order, freedom of speech, of the press, of assembly, of petition, freedom of conscience and worship and freedom of religious teaching.

5. **Administration.**—For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua-New Guinea Provisional Administration see Official Year Book No. 36 and earlier issues.

For administrative purposes the Territory is divided into the eight following districts :—New Britain, comprising New Britain and adjacent islands ; Morobe, Madang, Central Highlands, and Sepik on the mainland ; New Ireland, comprising New Ireland, Lavongai and adjacent islands ; Manus, comprising the Admiralty Group ; and Kieta, the former German portion of the Solomon Islands. Each district is under a District Officer, assisted by a small staff.

6. **Reports to the League of Nations.**—Twenty reports to the League of Nations, in compliance with Article 6 of the Mandate, were published, the last being for the year ended 30th June, 1940.

§ 3. Population.

1. **White Population.**—The number of the white population for various years since 1885 is shown in the following table. At 30th June, 1947, the white population was 3,412, of whom 2,604 were males and 808 females.

TERRITORY OF NEW GUINEA : WHITE POPULATION.

Year.	Number.	Year.	Number.
1885	64	1939	4,608
1933	3,191	1940	4,399
1937	4,286	1941	4,101
1938	4,445	1947	3,412

2. **Asiatic Population.**—Malays seem to have been the first Asiatics brought by the Germans to German New Guinea ; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations ; in the year 1892 there were about 1,800 Asiatics on the mainland. By 1898 the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census and at 30th June, 1941, numbered 2,228, of whom 2,199 were Chinese and 29 Japanese. The Japanese at the 1933 Census numbered 73. The Chinese provide the skilled artisans of the Territory, and many of them are small traders. At the census of 30th June, 1947, non-Europeans numbered 2,215, of whom Chinese (1,769) and Filipinos (276) constituted the major proportion. Half-castes at the same date numbered 573.

3. **Native Population.**—As a large portion of the Territory is not under Government nfluence it is not possible to obtain reliable figures in regard to the number of the natives.

The following tables shows those enumerated as at 30th June, 1941 :

TERRITORY OF NEW GUINEA : NATIVE POPULATION AT 30th JUNE, 1941.

(Including Indentured Labourers.)

District.	Children.			Adults.			Total.		
	Males.	Females	Persons.	Males.	Females	Persons.	Males.	Females	Persons.
Kieta ..	11,307	9,912	21,219	15,618	15,218	30,836	26,925	25,130	52,055
Madang ..	37,406	30,897	68,303	58,786	54,901	113,687	96,192	85,798	181,990
Manus ..	3,259	2,749	6,008	4,235	3.891	8,126	7,404	6.640	14,134
Morobe ..	29,334	26,348	55,682	42,541	39,076	81,617	71,875	65,424	137,299
New Britain ..	21,737	19,349	41,086	34,563	25,938	60,501	56,300	45.287	101,587
New Ireland ..	7,619	6,422	14,041	15.791	11,723	27,514	23.410	18,145	41,555
Sepik ..	32,223	27,772	59,995	44,049	45,060	89,109	76,272	72,832	149,104
Total ..	142,885	123,449	266,334	215.583	195,807	411,390	358.468	319,256	a684,284

(a) Includes 6,560 Mission scholars, constabulary, etc., not distributed.

The number of natives indentured as labourers on 31st March, 1947, was 7,209. In addition, there were 6,889 non-indentured employees.

§ 4. The Natives.

1. **General.**—The natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Odd tribes of Negritoes exist in the mountains of New Guinea. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (See Official Year Book, No. 16, p. 670, and *Official Handbook of the Territory*. Pt. V.)

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows. The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system

exists. In districts where a great many coco-nut palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coco-nut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (See Official Year Book No. 17, p. 634, and *Official Handbook of the Territory*.)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. For many years an anthropologist was engaged consolidating the work already done, and extending it throughout the Territory. The results of his work appear in special reports.

4. **Education.**—Provision for the education of natives is made in the Ordinance of 1922–1938 under which the Administrator is authorized to establish schools, grant money therefor, prescribe instruction, and arrange for the training of teachers and other matters. The expenditure on native education in 1940–41 was £6,827. Though the natives are liable to pay education tax, none has been collected since 1922–23. The European teachers have been seconded from the Education Department of Queensland. During the year ended 30th June, 1941, the following schools were maintained by the Administration :—Native elementary schools and native day schools, Malaguna, Tavui, Nodup and Pila Pila, near Rabaul, and Kavieng, and a native elementary school at Chimbu (Morobe) ; a native technical school, Malaguna ; a native agricultural school, Keravat. In addition there are schools for Europeans at Rabaul, Kavieng and Wau. A new day school for European children was erected at Bulolo in the Morobe District during the year.

A considerable amount of educational work is carried out by the missions, the schools maintained being of three classes : (*a*) elementary schools in villages ; (*b*) intermediate boarding schools at head-quarters ; and (*c*) high schools and technical schools. At 30th June, 1941, the various missions maintained 31 training centres, 51 high and technical schools, 144 elementary schools, and 2,397 village schools. The pupils numbered 65,598 at 30th June, 1940.

The missions also conduct schools for Chinese children in Rabaul and Kavieng.

The granting of assistance to mission schools is provided for by the Education Ordinance, but no grants have hitherto been made.

5. **Health of Natives.**—In a report dealing with the health of the natives in New Britain submitted before the 1914–18 War, it was stated that "the natives in the districts examined are not degenerate ; but they are sick ". The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life directly or through lowering vitality are—Malaria, respiratory diseases, dysentery, frambœsia, yaws, tropical ulcer, hookworm, filariasis and beriberi.

The Health Department of the Administration consists of (i) a staff of medical officers, medical assistants and orderlies ; (ii) native hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations) ; (iii) a laboratory ; (iv) training system for natives as medical orderlies ; (v) scheme of distribution of medical necessaries ; and (vi) leprosaria. It also undertakes the general oversight of sanitary conditions.

6. **Missions.**—Several mission societies have operated in the Territory. The Society of the Sacred Heart of Jesus worked in the Bismarck Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of North-East New Guinea from Sek to the Dutch border, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Liebenzell Mission in the Admiralty Group, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which worked along the coast of North-East New Guinea from Sek to the

Papuan border, the Melanesian Mission (Anglican) in New Britain, and the Seventh Day Adventist Mission in Bougainville and New Britain. All these societies include teaching and planting with their missionary work.

§ 5. Land Policy.

1. **Acquisition of Land.**—A short account of the modes of acquiring land appears in Official Year Book No. 19, p. 590, but considerations of space preclude its repetition.

2. **Land Policy of the Present Administration.**—The Land Ordinance 1922–1941 provides for sale as well as leasing of land belonging to the Administration. The divergence from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposal by sale of the freehold properties taken over from Germans, and which until 1927 were controlled by the Expropriation Board. The general land policy is based on the leasehold principle. All grants or leases contain a reservation to the Administration of all minerals, including mineral oil. Leases are for a term of 99 years except where a shorter period is provided. Lands, except in towns, are classified by a Land Board into land suitable for agriculture (Class A) and land not so suitable (Class B), and the unimproved value of the land is assessed. In the case of agricultural leases for more than 30 years the rent is 5 per cent. of the unimproved value, with power to remit during the first ten years, and subject to reappraisement every 20 years. Pastoral leases of lands of Class B may be granted for terms not exceeding 30 years, at a rental of 2½ per cent. of the unimproved value, subject to reappraisement every 10 years. Agricultural leases are subject to improvement conditions and pastoral leases to stocking conditions. Leases of town allotments may be granted for terms not exceeding 99 years, at a rent to be fixed at such percentage of the unimproved value as is prescribed.

The following table shows the leases in force on 30th June, 1941 :—

TERRITORY OF NEW GUINEA : LEASES IN FORCE, 30th JUNE, 1941.

Tenure.	No. of Leases.	Area.
		Acres.
Agricultural leases	442	141,628
Pastoral leases	3	9,496
Residence and business leases	320	334
Special leases	56	707
Mission leases	441	1,542
Chinatown leases	213	58
Long period leases from German regime ..	115	5,189

The area of the Territory is estimated at 59,517,593 acres, of which 906,763 acres had been purchased from the natives by the Administration to 30th June, 1941. This alienated land comprised 521,057 acres of freehold, 158,952 acres of leasehold, 200,144 acres held by the Administration, and 26,610 acres vested in the Director of District Services and Native Affairs as a trustee for natives. The area alienated in 1940–41 was 3,360 acres.

3. **Registration of Titles.**—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the Lands Registration Ordinance 1924–1939.

§ 6. Production.

1. **General.**—The natives have been described as a people of peasant proprietors, practising a crude form of agriculture. Their gardens and groves furnish but a small amount of produce for oversea trade, and the exports of the Territory grew only as European plantations were made, and natives were employed to work them.

Scientific methods of cultivation have been adopted, and production has been greatly increased thereby. Bounties are paid by the Commonwealth Government on cocoa beans and shells, hemp and coir, sago, vanilla beans, bamboos and rattans, spices and kapok, produced in the Territory and exported direct to Australia for home consumption.

2. **Agriculture.**—(i) *General.* Under the supervision of the Director of Agriculture soil analysis has been undertaken in different parts of the Territory and an agricultural chemist was appointed in 1939 to carry out this specialized work. A demonstration plantation has been established at Keravat where natives are being trained in tropical agriculture. A laboratory and a herbarium have been established, an entomologist and economic botanist engaged, and travelling inspectors appointed for the purpose of combating plant pests. Experiments are being carried out with a variety of crops. The foregoing measures, in conjunction with the Papua and New Guinea Bounties Act 1937 and the preference given by the Commonwealth Tariff to certain produce grown in the Territories, have greatly stimulated tropical agriculture.

(*a*) *Coco-nuts.* Coco-nut growing was, prior to the outbreak of war in September, 1939, by far the most important industry in the Territory, but low prices followed by the collapse of the world copra market checked expansion, the exports in 1940–41 being valued at only £266,970 compared with £504,627 in the previous year and with £1,231,309 (76,409 tons) in the peak year 1936–37.

(*b*) *Tobacco.* In 1940–41 many planters were cultivating tobacco to cater for the local market. Two companies manufactured tobacco suitable for issue to the natives or for trade. In some instances planters issued the dry leaf to the native labourers who make their own cigars and cigarettes.

(*c*) *Cotton.* In 1924–25 the Government obtained 1,615 lb. of cotton seed, and cultivation was tried at the experimental stations as well as by private planters, including a few natives, but little progress has been made.

(*d*) *Kapok.* During 1940–41 the cultivation of kapok continued on a small scale, the local demand being more than sufficient to absorb the available crop.

(*e*) *Cocoa.* Greater interest is being displayed in the cultivation of cocoa. The quality of the beans produced is good, and 292 tons were exported during 1940–41.

(*f*) *Desiccated Coco-nut.* Three desiccated coco-nut factories have been established in the Territory. The quantity exported during 1940–41 was 1,877 tons, an increase of 96 tons over the previous year's figure.

(*g*) *Coffee.* In 1940–41 two plantations of coffee were in satisfactory condition and were commencing to yield. Seventy-four tons of coffee of good quality, valued at £5,525 were exported during that year and were well received on the Australian market.

(*h*) *Rubber.* The tapping of rubber trees was increased during 1940–41 mainly because of the satisfactory price of rubber.

(*i*) *Other Crops.* The climate and soil of New Guinea are suitable for the cultivation of rice, Manilla hemp, cinchona, nutmeg, vanilla, peanuts and maize, but hitherto their cultivation has either not advanced beyond the experimental stage or has been attempted on a small scale only. Sugar-cane of many varieties flourishes, and the natives cultivate extensive areas for their own use; other indigenous food-producing plants include the sago palm and the cassava.

(*j*) *Plants Yielding Power Alcohol.* It seems probable that alcohol for power purposes will be produced economically. The sago palm and nipa palm yield as much as 60 gallons per ton, and in places are abundant.

(ii) *Plantations.* During 1934–35 the Administration disposed of the several plantations maintained by it with the exception of the demonstration plantation at Keravat. The principal crops grown on plantations are shown in the table hereunder for the year ended 30th June, 1940. The figures are not complete, but they give an indication of the progress of agriculture in the Territory to that date.

TERRITORY OF NEW GUINEA : PLANTATIONS, 1939–40.

(Excluding Native Reserves.)

Crop.	Area Planted.(*a*)	Area Bearing.	Yield.
	Acres.	Acres.	Tons.
Coco-nuts	261,676	210,954	(*b*)71,583
Cocoa	5,827	2,301	570
Coffee	2,792	1,935	56
Rubber	2,481	1,591	95
Kapok	556	321	15
Native Food (*c*)	3,289	1,453	2,099
Other	912	106	..
Total	277,533	218,661	..

(*a*) Includes inter-planted crops. (*b*) Copra ; desiccated coco-nut, 696 tons, also produced. (*c*) Native food of all kinds is mostly grown between young coco-nut palms not yet in bearing.

The area of plantations for various years from 1885 to 1940 is shown hereunder. As in the case of the previous table, the figures exclude native plantations :—

TERRITORY OF NEW GUINEA : PLANTATIONS.

Year ended June—	Total Area.	Area Planted.	Area under Coco-nuts (including Area not in Bearing).
	Acres.	Acres.	Acres.
1885	148	(*a*)	(*a*)
1895	2,152	(*a*)	(*a*)
1911	58,837	(*a*)	51,510
1914	84,488	(*a*)	76,847
1924	411,275	(*a*)	172,373
1932	460,942	216,730	211,882
1937	487,375	244,066	234,189
1938	496,118	262,547	239,976
1939	504,000	264,877	253,235
1940	525,965	277,533	261,676

(*a*) Not available.

3. **Live Stock.**—The coco-nut plantations are now of a sufficient area to maintain numerous live stock, the stock being depastured on the indigenous grasses growing between the rows of palms. In 1939–40 there were 1,323 horses, 20,494 cattle, 1,184 sheep, 9,327 goats, and 6,160 pigs (excluding the large number of pigs kept by the natives).

4. **Timber.**—An investigation of the timber resources was made by the Commonwealth Inspector-General of Forests, and a report in connexion therewith was published in 1926. According to this report, while offering no prospects of immediate gain to large sawmilling interests, the Territory possesses forest potentialities of a high order. Surveys of the timber resources of the Morobe District indicate that there are approximately 500 million super. feet of timber in the pine forests of the Bulolo Valley. This is supporting three sawmills cutting for local use. It is proposed to harvest this forest over a period of years and progressively re-afforest the area. Sawmills controlled by the Administration are established at Lae, Madang and Keravat, and are supplying local requirements. The log export trade has not yet recovered, but in 1947 a first shipment of some 400,000 super. feet of timber was made. When shipping is again available it is expected that the export trade will rapidly overtake the pre-war figure of 6¼ million super. feet.

The Forestry Ordinance 1936–1937 provides for the issue of permits and licences to cut timber, but at present the policy is to call tenders for timber areas as they can be made available. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but must be obtained through the Administration. A royalty is payable on all forest produce taken under a permit or licence. Some 26 permits, which were in force when the war intervened, have been extended to cover the five-year period of suspension, and cover approximately 200,000 acres.

5. **Fisheries.**—The wealth of the waters of the Territory has been little exploited. Fish is caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Pearl-shell is exported in fair quantities, while bêche-de-mer, trochus-shell and tortoise-shell also figure amongst the exports. The value of marine products exported in 1940–41 was £9,255, compared with £11,956 in the previous year.

6. **Mining.**—Except for gold there has been little mining in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold was discovered in the Morobe District in 1926; the field is situated about 60 miles (35 by air) inland from Salamaua, the nearest coastal port. Communication was established with the coast by a regular aeroplane service. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kebenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnesite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

Mining is regulated by the Mining Ordinance 1928–1940. Copies of the Ordinance and Regulations made thereunder may be obtained from the Secretary, Department of External Territories, Canberra.

The following table shows the production of gold during the five years 1936–37 to 1940–41:—

TERRITORY OF NEW GUINEA: GOLD PRODUCTION.

Year.	Quantity.	Value.(a)
	Fine oz.	£
1936–37	223,120	1,938,694
1937–38	223,929	1,935,954
1938–39	237,705	2,153,018
1939–40	278,922	2,917,526
1940–41	263,097	2,808,835

(a) Valued at average price realized for fine gold in Australia.

Since the high market price of gold has been maintained, the search for profitable areas in various parts of the Territory has not diminished and systematic testing by drilling and other means has been undertaken on alluvial areas previously considered unworthy of attention. Although there were no new discoveries of alluvial or reef gold during 1941, work proceeded steadily on the known gold-bearing areas.

A search for petroleum has been actively conducted on the mainland. The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinance 1938–1939, which has facilitated the carrying out of geological surveys and prospecting activities generally. On 30th June, 1941, two permits to search for petroleum were in force.

§ 7. Trade.

1. **Customs Tariff.**—With the exception of high revenue rates on ale, spirits, beverages and tobacco and a duty of 3d. per gallon on petrol, kerosene and lubricating oil, the tariff of the Territory of New Guinea is generally on a 10 per cent., ad valorem

basis. Only 72 items are mentioned in the import schedule, of which approximately 60 are on the free list consisting of articles for use by the Administrator, the Trade Commissioners and the Missions, and medical supplies, live stock, meat, fish, fresh fruit, vegetables and certain essential manufactures for use in the Territory. The rate of duty for the remaining items as well as for all other goods not mentioned in the schedule is 10 per cent. ad valorem. No preferential tariff rates are provided in the schedule.

Export duties are levied on copra, trepang, shell, feathers and sulphur. When the price, or the assessed value of copra is less than £5 15s. per ton no tariff is imposed, but when the price exceeds this figure but is not more than £11 per ton 2s. 6d. per ton is charged; thereafter the charge increases on a sliding scale to 11s. 6d. per ton as the price rises to £18, with an additional 2s. per ton for every further increase of £1 in the price of copra. Imports in 1940–41 amounted to £962,129 on which £147,452 was received in import duties, while £590 was paid in export duties and royalties.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported direct from the Territory of New Guinea (see Chapter XI. "Trade"), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—Values of the principal items of imports and exports for the years 1936–37 to 1940–41 are shown below. The values of exports are expressed in Australian currency, but it is not possible to determine accurately the currency of the £ in the table of imports.

TERRITORY OF NEW GUINEA : IMPORTS AND EXPORTS.

Particulars.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
IMPORTS.					
	£	£	£	£	£
Foodstuffs of animal origin ..	142,943	157,391	152,023	165,637	127,464
Foodstuffs of vegetable origin ..	186,732	190,657	158,895	164,751	145,070
Spirituous and alcoholic liquors ..	50,550	52,385	54,969	50,161	46,753
Tobacco and preparations thereof	59,045	58,155	63,122	61,160	51,931
Live animals	1,870	1,843	1,328	664	508
Animal substances	1,227	961	1,124	1,587	179
Vegetable substances and fibres ..	3,539	4,191	3,307	3,640	2,386
Apparel, textiles and manufactured fibres..	152,923	182,590	138,077	130,360	93,164
Oils, fats and waxes ..	56,982	72,080	65,901	97,370	72,153
Paints and varnishes ..	14,422	11,044	10,934	9,932	7,818
Stones and minerals	14,039	16,030	8,164	4,314	5,439
Metals, manufactures and machinery	431,216	635,991	470,781	387,125	252,750
Rubber and leather and manufactures thereof	13,810	15,663	16,365	21,668	16,739
Wood and wicker	28,860	33,565	29,195	20,617	9,105
Earthenware, cement, glass, etc.	17,113	14,251	13,215	13,549	8,383
Paper and stationery	22,917	24,026	22,829	24,169	19,122
Jewellery and fancy goods ..	11,282	21,328	14,133	10,231	10,045
Optical and scientific instruments	18,610	21,377	22,318	14,750	17,140
Drugs, chemicals and fertilizers ..	44,907	46,878	46,163	45,101	45,539
Miscellaneous	38,636	50,561	47,992	41,311	30,441
Specie	80,400	31,500	..	..	..
Total	1,392,023	1,642,467	1,340,835	1,268,097	962,129

TERRITORY OF NEW GUINEA : IMPORTS AND EXPORTS—*continued.*

Particulars.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
EXPORTS.					
	£	£	£	£	£
Copra	1,231,309	847,734	727,949	504,627	266,970
Cocoa	6,600	4,475	6,580	11,340	11,680
Ivory nuts	767	162	..	7	..
Trepang	1,350	2,250	2,025	1,680	1,870
Shell (trochus, etc.)	26,960	12,478	10,560	10,227	7,383
Tortoise-shell	50	91	89	49	2
Gold	2,020,667	2,028,980	2,129,263	3,021,731	2,797,226
Desiccated coco-nut	86,930	73,423	69,960	89,050	93,850
Rubber	..	242	4,050	13,328	19,027
Miscellaneous	45,073	25,334	23,419	29,081	55,976
Total	3,419,706	2,995,169	2,973,895	3,681,120	3,253,984

3. **Direction of Trade.**—Particulars of the countries of origin of the imports into the Territory of New Guinea and of destination of the goods shipped therefrom during the years 1938–39 to 1940–41, are given in the following table.

TERRITORY OF NEW GUINEA : DIRECTION OF TRADE.

Country.	Imports.			Exports.		
	1938–39.	1939–40.	1940–41.	1938–39.	1939–40.	1940–41.
	£	£	£	£	£	£
Australia ..	563,594	583,291	489,369	2,326,269	3,283,246	3,039,767
United Kingdom	154,501	119,042	79,136	337,605	220,200	47,599
Other British ..	48,163	55,306	63,745	..	..	29,976
China.. ..	69,831	87,412	43,317	17,428	11,115	1,870
Japan ..	46,627	34,921	28,063	7,445	7,266	28,822
France ..	3,806	2,523	1,275	6,193	12,291	..
Germany ..	71,245	17,430	4,595	31,829	2,669	..
U.S.A. ..	265,591	247,189	167,437	..	62,529	21,131
Other.. ..	117,477	120,983	85,192	247,126	81,804	84,819
Total ..	1,340,835	1,268,097	962,129	2,973,895	3,681,120	3,253,984

The bulk of the imports into the Territory of foodstuffs, beer, coal, paints, boats, launches and soap comes from Australia, which also supplies large quantities of machinery and metal manufactures, drugs, explosives. tobacco, cigarettes, apparel, boots, leather manufactures, timber, stationery and polishes.

§ 8. Shipping and Communication.

1. **General.**—Prior to the Japanese invasion a subsidized mail service between New Guinea and Australia was maintained by Burns, Philp and Coy. Ltd., which also operated a two-monthly non-subsidized service between Australia, New Guinea, Hong Kong and Saigon. The Dutch Royal Packet Navigation Company's vessel called at Rabaul every five weeks *en route* from Singapore to Australia. Shipping within the Territory is regulated by the Shipping Ordinances 1936 and the Coastal Shipping, Ports and Harbours Regulations.

2. **Oversea Tonnage in 1940–41.**—The number and net tonnage of oversea vessels which entered and cleared the Territory during 1940–41 are shown hereunder.

TERRITORY OF NEW GUINEA : SHIPPING, 1940–41.

Nationality.	Vessels Entered.		Vessels Cleared.		Total.	
	Number.	Net Tonnage.	Number.	Net Tonnage.	Number.	Net Tonnage.
American	4	6,132	4	6,132	8	12,264
British	67	171,669	68	174,684	135	346,353
Dutch	5	12,090	5	12,090	10	24,180
Greek	1	3,209	1	3,209	2	6,418
Japanese	14	15,452	14	15,452	28	30,904
Norwegian	1	1,482	1	1,482	2	2,964
Panamanian	1	1,321	1	1,321	2	2,642
Thai	1	1,995	1	1,995	2	3,990
Total	94	213,350	95	216,365	189	429,715

3. **Local Shipping.**—Inter-island shipping services were maintained by the steamers and motor vessels of Burns, Philp and Coy. Ltd., and W. R. Carpenter and Coy. Ltd. A number of smaller motor vessels were also engaged in this trade.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 200 miles long in New Ireland and also a road from Lae to Wau in the Morobe District. Elsewhere there are few roads outside plantations and the District Officers' station. The large rivers of the mainland are as yet but little used.

There is a high-power wireless station at Rabaul, and low-power installations at some out-stations.

5. **Communication by Air.**—The discovery of gold in New Guinea resulted in great aviation activity in the vicinity of the gold-fields. On account of the mountainous country and dense undergrowth between the coast and the gold-fields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land is an irksome and costly process. The fields are situated about 60 miles (35 by air) inland from Salamaua, and whereas aircraft cover the distance in less than an hour, the nature of the country is such that a journey by other means occupies more than a week. During 1931–32 an air service was established between Port Moresby and the gold-fields, reducing the time occupied by the journey from Australia by about seven days. At 30th June, 1941, 41 aeroplanes were operating in New Guinea.

A weekly subsidized air service between Sydney and Rabaul came into operation on 30th May, 1938, and ceased in January, 1942. Passengers and mails were carried and the route followed was Sydney, Brisbane, Rockhampton, Townsville, Cairns, Cooktown, Port Moresby, Salamaua and Rabaul. Qantas now operates a tri-weekly air service between Australia and Port Moresby, in Papua, and Lae, in New Guinea, with weekly extension to Rabaul.

Further reference to New Guinea air activities is contained in Chapter V. "Transport and Communication" (see p. 196).

§ 9. Revenue and Expenditure.

Details of the revenue collected from various sources and the expenditure during each of the years 1936–37 to 1940–41 are given hereunder :—

TERRITORY OF NEW GUINEA : REVENUE AND EXPENDITURE.

Particulars.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41
REVENUE.					
Taxation—	£	£	£	£	£
Customs(a)	233,657	247,062	214,629	207,261	158,221
Licences	12,654	13,087	13,796	12,667	10,408
Native Head Tax	21,859	20,481	21,417	20,025	21,786
Stamp duties	6,861	6,182	6,467	5,978	3,906
Postal	25,208	47,240	27,163	20,340	15,583
Lands	17,006	16,179	18,416	15,281	16,357
Mining—					
Royalty on gold	97,622	97,464	107,975	143,906	119,792
Other	24,154	19,479	16,403	40,298	50,995
Fees and fines	24,377	19,285	17,947	16,155	13,615
Sales of stores, etc.	2,605	2,472	2,170	2,428	2,011
Miscellaneous	15,067	17,467	14,453	12,351	11,076
Total	481,070	506,398	460,836	496,690	423,750
EXPENDITURE.					
	£	£	£	£	£
Treasury and Audit	66,177	52,570	54,736	60,628	45,530
Agriculture	15,851	17,722	19,424	20,337	19,475
Public Justice	31,209	32,809	34,245	34,530	31,606
Public Health	73,191	80,377	89,784	85,207	80,162
Public Works	29,228	30,954	34,802	28,097	22,730
District Services and Native Affairs	109,705	115,648	125,876	127,296	106,107
New Works	66,223	70,011	69,146	63,257	48,509
Native Welfare	6,177	7,185	6,453	6,621	6,078
Other	62,357	[b]101,337	68,114	74,641	71,595
Total	460,118	508,613	502,580	500,614	431,792

(a) Includes harbour dues, wharfage and storage fees. (b) Includes £40,011, expenditure due to the volcanic eruption.

For information for 1945–46 see Papua, § 7, p. 352.

NAURU (Trusteeship).

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in longitude 167° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system

of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and the Missions, the whole of the island is owned by individual natives. The average shade temperature ranges between 72° and 95° F., and the average humidity between 70 and 80 per cent. The average rainfall is 85 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years. Similarly in 1938 only 20.94 inches were recorded.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on the 17th December, 1920. On 2nd July, 1919, the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919. and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923, and ratified by the Commonwealth Parliament by the Nauru Island Agreement Act 1932.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, communications with Nauru ceased, and the island was occupied by Japanese forces. It was re-occupied by a joint Australian Naval and Military Force on 14th September, 1945, and civil administration was re-established on 1st November, 1945.

3. **Trusteeship Agreement.**—On 1st November, 1947 the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand and the United Kingdom in substitution for the terms of the mandate under which the Territory had been administered. This Agreement designates the Governments of Australia, New Zealand and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement are as follows:—

> *Preamble:* In pursuance of a Mandate conferred upon His Britannic Majesty, the Territory of Nauru has been administered in accordance with Article 22 of the Covenant of the League of Nations by the Government of Australia on the joint behalf of the Governments of Australia, New Zealand and the United Kingdom of Great Britain and Northern Ireland.
>
> The Charter of the United Nations, signed at San Francisco on 26th June, 1945, provides by Article 75 for the establishment of an international trusteeship system for the administration and supervision of such territories as may be placed thereunder by subsequent individual agreements.
>
> His Majesty desires to place the Territory of Nauru under the trusteeship system and the Governments of Australia, New Zealand and the United Kingdom undertake to administer it on the terms set forth in the present Trusteeship Agreement.
>
> Therefore the General Assembly of the United Nations, acting in pursuance of Article 85 of the Charter, approves the following terms of the trusteeship for the Territory of Nauru in substitution for the terms of the Mandate under which the Territory has been administered:—
>
> *Article* 1. The Territory to which the Trusteeship Agreement applies (hereinafter called the Territory) consists of the island of Nauru (Pleasant Island) situated approximately 167° longitude East and approximately 0° 25′ latitude South, being the Territory administered under the Mandate above referred to.

Article 2. The Governments of Australia, New Zealand and the United Kingdom (hereinafter called the Administering Authority) are hereby designated as the joint authority which will exercise the administration of the Territory.

Article 3. The Administering Authority undertakes to administer the Territory in accordance with the provisions of the Charter and in such a manner as to achieve in the Territory the basic objectives of the international trusteeship system, which are set forth in Article 76 of the Charter.

Article 4. The Administering Authority will be responsible for the peace, order, good government and defence of the Territory, and for this purpose, in pursuance of an agreement made by the Governments of Australia, New Zealand and the United Kingdom, the Government of Australia will on behalf of the Administering Authority and except and until otherwise agreed by the Governments of Australia, New Zealand and the United Kingdom continue to exercise full powers of legislation, administration and jurisdiction in and over the Territory.

Article 5. The Administering Authority undertakes that in the discharge of its obligations under Article 3 of this agreement—

1. It will co-operate with the Trusteeship Council in the discharge of all the Council's functions under Articles 87 and 88 of the Charter;
2. It will, in accordance with its established policy—
    - (*a*) take into consideration the customs and usages of the inhabitants of Nauru and respect the rights and safeguard the interests both present and future of the indigenous inhabitants of the Territory; and in particular ensure that no rights over native land in favour of any person not an indigenous inhabitant of Nauru may be created or transferred except with the consent of the competent public authority;
    - (*b*) promote, as may be appropriate to the circumstances of the Territory, the economic, social, educational and cultural advancement of the inhabitants;
    - (*c*) assure to the inhabitants of the Territory, as may be appropriate to the particular circumstances of the Territory and its peoples, a progressively increasing share in the administrative and other services of the Territory and take all appropriate measures with a view to the political advancement of the inhabitants in accordance with Article 76 (*b*) of the Charter;
    - (*d*) guarantee to the inhabitants of the Territory, subject only to the requirements of the public order, freedom of speech, of the press, of assembly and of petition, freedom of conscience and worship and freedom of religious teaching.

Article 6. The Administering Authority further undertakes to apply in the Territory the provisions of such international agreements and such recommendations of the specialized agencies referred to in Article 57 of the Charter as are, in the opinion of the Administering Authority, suited to the needs and conditions of the Territory and conducive to the achievement of the basic objectives of the trusteeship system.

Article 7. In order to discharge its duties under Article 84 of the Charter and Article 4 of the present agreement, the Administering Authority may take all measures in the Territory which it considers desirable to provide for the defence of the Territory and for the maintenance of international peace and security.

4. **Administration.**—The administration of the island is vested in the Administrator, who is obliged to conform to instructions issued by the Government which appointed him, and all ordinances made by him are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue. Native

industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by the natives. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

5. **Population.**—The population figures on 1st April, 1939 and on 31st December, 1940, 1941, 1946 and 1947 are given hereunder :—

NAURU : POPULATION.

Race.	1939.	1940.	1941.	1946.	1947.
Europeans	171	192	68	159	219
Chinese	1,512	1,350	584	787	1,161
Nauruans (*a*)	1,765	1,761	1,827	1,369	1,413
Other	44	49	193	33	80
Total	3,492	3,352	2,672	2,348	2,873

(*a*) The natives of Nauru are Micronesians.

Births in 1947 numbered 87. There were 18 marriages (three between Europeans) and 23 deaths.

6. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied. The total number of persons receiving treatment at 1st May, 1947, was 59, of whom 28 were in the Leper Segregation Hospital. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commission for its employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amœbic and bacillary, is endemic. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination once a month. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.

7. **Education.**—Formerly the education of Nauruan and other native children was undertaken by the Missions subsidized by the Administration, but on 1st October, 1923, the Administration assumed responsibility for education. There are 5 primary schools for native, and one for European children. A total of 378 native children and 24 European children were enrolled at December, 1947. The European school is in charge of a teacher on loan from the Victorian Education Department, who also supervises education matters generally.

The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen for Nauruan and other native children.

8. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided.

9. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

10. **Phosphate Deposits.**—(i) *General.* From 1906 to 1919 the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island

(about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office) The quantity on Nauru has been estimated at not less than 50,000,000 tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Royalty on Phosphate.* Under a revised agreement between the British Phosphate Commissioners and the Nauruan land-owners, an increased royalty of 1s. 1d. per ton of phosphate exported has been payable from 1st July, 1947, as follows :—

(*a*) 6d. per ton to be paid to the Nauruan landowner concerned;
(*b*) 3d. per ton to the Administrator for the benefit of the Nauruan people;
(*c*) 2d. per ton to the Administrator to be held in trust for the Nauruan landowner concerned and invested at compound interest for a period of 20 years. The capital will then remain invested and the interest thereon will be paid to the landowner.
(*d*) 2d. per ton to the Administrator to be held in trust for the Nauruan community and invested until the year 2000 at compound interest.

From 1st July, 1947 the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7 10s. for areas less than an acre.

(iii) *Nauru and Ocean Island Phosphate Industry.* The following table gives particulars regarding exports of phosphate during the years 1937–38 to 1941–42 (when shipments ceased) :—

NAURU AND OCEAN ISLAND : EXPORTS OF PHOSPHATE.

Year.	Total.	To Australia.	To New Zealand.
	Tons.	Per cent.	Per cent.
1937–38	1,169,361	66.17	24.81
1938–39	1,228,590	67.06	23.63
1939–40	1,243,428	54.49	32.14
1940–41	626,149	50.14	38.76
1941–42	144,454	53.79	46.21

From Nauru alone during the calendar year 1941 the export was 99 150 tons. Shipments were re-commenced in July, 1946, and 473,114 tons were exported from Nauru and Ocean Island to Australia and New Zealand to December, 1947.

(iv) *Accounts of Commission.* A statement of Nauru and Ocean Island activities for the period from July, 1939 to June, 1947 is given hereunder :—

NAURU AND OCEAN ISLAND : SALES OF PHOSPHATE.

Heading.	1939–40.	1940–41.	1941–42.	1942 to 1946.(*a*)	1946–47.
	£	£	£	£	£
Receipts from sales, etc. ..	1,041,418	749,354	387,464	..	551,537
F.o.b. cost, including interest on capital, sinking fund, etc.	1,037,208	745,233	327,607	..	508,224

(*a*) Period of, and immediately following, Japanese occupation.

During the period of the Japanese occupation from August, 1942 to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commission was engaged in meeting the phosphate requirements of Australia and New Zealand from other available sources. Reconstruction of equipment destroyed during the Japanese occupation has progressed steadily and drying of phosphate was recommenced at Nauru in early December 1947.

The amount due by the British Phosphate Commission to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed to a suspension of interest and sinking fund payments from 1st July. 1942, while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946–47, pending a review of the position in 1950, when it is anticipated that reconstruction will be completed. The redemption fund now totals £507,127.

(v) *Employees.* Apart from a limited number of Europeans and a few Pacific Islanders, the employees are Chinese engaged under a two years' contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

11. **Trade.**—The Customs Tariff of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider, and perry, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt.

The Tariff rates apply to all countries alike. Information regarding imports and exports for the years 1937 to 1941 is shown in the following table.

NAURU : IMPORTS AND EXPORTS.

Heading.		Year ended 31st December—				
		1937.	1938.	1939.	1940.	1941.
Imports ..	£	144,454	272,256	170,624	192,749	106,978
Exports—						
Phosphate ..	tons	688,900	841,050	932,100	808,400	99,150
	£	513,989	546,683	605,974	541,168	69,375

Of the total imports Australia supplied £72,348 or 68 per cent. during 1941 ; the balance came mainly from the United Kingdom, China, Dutch East Indies, New Zealand and Canada in that order.

In 1941 56,850 tons of phosphates were exported to Australia, and 42,300 tons to New Zealand.

12. **Revenue and Expenditure.**—The revenue and expenditure of the Administration during the years 1939 to 1947 were as follows :—

NAURU : REVENUE AND EXPENDITURE.

Heading.	Year ended 31st December—				
	1939.	1940.	1941.	1942 to 1945.(*a*)	1947.(*b*)
	£	£	£	£	£
Revenue	33,084	27,104	12,023	..	21,123
Expenditure	29,391	26,223	23,951	..	84,641

(*a*) Period of Japanese occupation. (*b*) Period September, 1945 to June, 1947.

Of the revenue in the period September, 1945 to June, 1947, royalty on phosphate amounted to £1,692, post office receipts, £5,228, customs, £2,283, radio, £2,927, licences and internal revenue, £3,705, and interest on investments, £458. At the close of 1941 the accumulated funds of the Administration amounted to £46,297, but these have since been used to finance the initial reconstruction and rehabilitation measures. Arrangements have been made with the British Phosphate Commissioners for additional funds, also, for these purposes.

CHAPTER XI.

TRADE.

§ 1. Introductory.

Constitutional Powers of the Commonwealth in regard to Commerce.—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution with respect to oversea trade and commerce will be found in Sub-section 51 (i) and Sections 86 to 95 thereof (see pp. 15 and 21–22 *ante*).

§ 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—In previous issues of the Official Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting oversea trade are given in chronological order. The Customs Acts represent the administrative or machinery Acts under which the Department of Trade and Customs operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duties operative from time to time.

The Acts at present in force are: The Customs Act 1901–1936; Customs Tariff, 1933–1939; Customs Tariff (Canadian Preference) 1934–1939; Customs Tariff (Exchange Adjustment) Act, 1933–1939; Customs Tariff (Industries Preservation) Act, 1921–1936; Customs Tariff (Newfoundland Preference) 1939; Customs Tariff (New Zealand Preference) 1933–1934; Customs Tariff (Papua and New Guinea Preference) 1936; Customs Tariff (Southern Rhodesian Preference) 1941; Customs Tariff (Primage Duties), 1934; Trading with Enemy Act 1939–1940.

2. **Customs Tariffs.**—The Customs Tariff 1921–1930 provided a British Preferential Tariff, an Intermediate Tariff and a General Tariff. The Intermediate Tariff was omitted from the Customs Tariff 1933 but was restored by the Customs Tariff 1936.

"British Preferential Tariff" rates of duty apply to goods the produce or manufacture of the United Kingdom provided such goods comply with the laws and statutory regulations for the time being in force affecting the grant of British preference, and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. The benefits of the British Preferential Tariff may be extended wholly or in part to any British non-self-governing colony, British protectorate or to certain territories governed under British mandate. The benefits of the British Preferential Tariff have been extended by separate Trade Agreements to certain goods the produce of the Dominions of Canada and New Zealand and to certain goods the produce of Newfoundland and of British non-self-governing colonies.

In submitting tariff schedules to Parliament on 20th March, 1936, the Minister for Trade and Customs said: "Another new feature of the schedules is the Intermediate Tariff. It has been re-introduced to provide a convenient avenue for expressing the level of duties which the Government propose should form the basis for trade treaties. The rates proposed under the protective items of the Intermediate Tariff express, in every case, a protective level for Australian industry as well as preserving the margins required under the Ottawa Agreement." The Customs Tariff 1933–1939 provides that the Governor-General may from time to time by proclamation declare that the Intermediate Tariff shall apply from a date and time specified to goods specified in the proclamation which are the produce or manufacture of the British or foreign country specified in the proclamation. The Intermediate Tariff was brought into operation on 1st January, 1937, by Customs Proclamations Nos. 338, 342, 343 and 360, which granted intermediate rates of duty to specified goods the produce of "Proclaimed Countries." The countries proclaimed include the United Kingdom, the Dominions and Colonies in respect of goods which do not comply with the conditions prescribed for the application of a lower tariff and most foreign countries under the terms entitling them to most-favoured-nation treatment. The United States of America was an important exception until 17th February, 1943, when Customs Proclamation No. 571 included it in the list of "Proclaimed Countries".

The "General Tariff" applies to all importations excepting :—

(*a*) Goods the produce or manufacture of the United Kingdom, shipped in the United Kingdom ;

(*b*) Goods the produce or manufacture of the following countries when admissible under the British Preferential Tariff or at a special rate of duty : Canada, New Zealand, Norfolk Island, Papua and New Guinea, Newfoundland, Southern Rhodesia, and British non-self-governing Colonies, British Protectorates and certain Territories governed under British mandate.

(*c*) Goods admitted under the provisions of the Intermediate Tariff.

The Customs Tariff 1933–1939 provides for duties on certain goods to be deferred. Where a deferred duty on any goods is provided in the Schedule, the Minister shall refer to the Tariff Board for inquiry and report on the question whether the deferred duty should or should not operate on and after the date to which it has been deferred. The Board shall report whether the goods in respect of which the deferred duty is provided are being made or produced in Australia or will be so made or produced on, or immediately after, the date to which the duty has been deferred—(*a*) in reasonable quantities ; (*b*) of satisfactory quality ; and (*c*) at a reasonable price having regard, among other things, to the probable economic effect of the imposition of the deferred duty upon other industries concerned, and upon the community in general. Upon receipt of a report from the Tariff Board, the Minister may defer the duty further by notice published in the *Commonwealth Government Gazette.*

3. **Preferential Tariff.**—(i) *British Preference.* The Commonwealth Tariff 1908 provided Preferential Tariff rates in favour of specified goods produced or manufactured in the United Kingdom. Subsequent legislation has extended the list of articles to which these rates apply. For the purpose of preferential treatment the following goods are deemed by Section 151A of the Customs Act 1901–1936 to be the produce or manufacture of the United Kingdom provided the final process of their production or manufacture was performed in that country.

(*a*) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes—
  (i) Materials wholly produced or wholly manufactured in the United Kingdom or in Australia ;
  (ii) Imported unmanufactured raw materials ;
  (iii) Imported manufactured raw materials as determined by the Minister.

(*b*) Goods of the factory or works cost of which not less than seventy-five per cent. is represented—
  (i) by labour or material of the United Kingdom ; or
  (ii) by labour or material of the United Kingdom and labour or material of Australia.

(*c*) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works cost of which not less than twenty-five per cent. or fifty per cent. if the Minister so determines is represented—
  (i) by labour or material of the United Kingdom ; or
  (ii) by labour or material of the United Kingdom and labour or material of Australia.

The benefits of the British Preferential Tariff have also been extended by separate Trade Agreements to certain goods the produce of the Dominions of Canada and New Zealand and of Newfoundland, and by separate Tariff legislation to the Territories of Papua and New Guinea.

At the Imperial Economic Conference held at Ottawa, Canada, during July and August, 1932, a trade agreement providing for special preferential trade conditions was made between the Governments of the United Kingdom and the Commonwealth of

Australia. A summary of the provisions of this agreement appeared in Official Year Book No. 26, pp. 868–873 and further references were made in subsequent issues of the Year Book

The five years' currency of the agreement terminated on 19th August, 1937, but, in view of the negotiations then in progress between the Governments of the United Kingdom and the United States of America for a trade agreement, a review of the terms of the Ottawa Agreement became a matter of urgency. The United Kingdom Government at the time sought the concurrence of the Dominions in the modification of certain preferences granted under the Ottawa Agreement in order to facilitate the satisfactory conclusion of an agreement with the United States of America. As a consequence, a conference of United Kingdom and Australian Ministers was held in London early in 1938 and a joint statement setting out the result of the conference was issued by the two Governments in the form of a Memorandum of Conclusions which was published by the United Kingdom Government on 20th July, 1938. Details of the Memorandum have been published in previous issues of the Official Year Book. The full text appears on pages 479–482 of Official Year Book No. 32.

The future of the agreement and of Empire preferences generally has been discussed in connexion with the proposals for the establishment of an International Trade Organization which are referred to in paragraph 7.

On the basis of the imports during 1913 the preferential provisions of the Tariff of 1908–1911 covered 65 per cent. of the imports of merchandise of United Kingdom origin, the margin of preference being equal to 5 per cent. of the value of the goods. On the basis of the imports during 1939–40 the Customs Tariff 1933–1939 extended the application of the Preferential Tariff rates to 86 per cent. of the imports from the United Kingdom, and at the same time increased the average margin of preference to 19 per cent. ad valorem. These percentages relate to all imports on which preference was granted, whether dutiable or free under the preferential provisions. With regard to imports on which preference was granted and which were dutiable under both the Preferential and General Tariffs, the average equivalent ad valorem rate of duty paid in 1939–40 under the Customs Tariff 1933–1939 on goods of United Kingdom origin was about 15.3 per cent., whereas the same goods under the General Tariff rates would have been called upon to pay an average rate of about 39.5 per cent.

* An application of the Customs Tariff 1933–1939 to the total imports of £A56,858,624 (including outside packages) from the United Kingdom entered for home consumption during 1939–40 shows that the value of the goods of United Kingdom origin which participated in the preferential provisions of the Tariff was £A47,668,186, upon which duty to the amount of £A4,217,357 was collected. Under the General Tariff the same goods would have paid £A13,406,659 duty or £A9,189,302 more than was paid at preferential rates, representing an additional duty of 19.3 per cent. on the value of the goods. It would be improper, however, to speak of this sum as the "value" of preference to the United Kingdom as some of the preferential goods would have come from the United Kingdom without preference. The principal classes which benefited under the Preferential Tariff and the additional duty that would have been collected under the General Tariff during 1939–40 were textiles, £3,510,802 ; metals and metal manufactures, £2,178,069 ; machines and machinery, £1,125,781 ; spirituous and alcoholic liquors, £109,091 ; drugs, chemicals, etc., £430,736 ; earthenware, glass, etc., £345,085 ; apparel, £208,058 ; paper, £241,044 ; manufactured fibres, £228,006 ; stationery and paper manufactures, £101,547 ; jewellery and fancy goods, £88,161 ; and optical, surgical and scientific instruments, £124,234.

The margin of preference granted by the preferential tariff has been increased to some extent by the operation of the Customs Tariff (Exchange Adjustment) Act 1933–1939. The total amount deducted cannot be stated, owing to the fact that, since the end of 1934, "net" rates of duty (after making allowance for exchange adjustment) recommended by the Tariff Board have been applicable.

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* In this, and succeeding, paragraphs, where values of imports into Australia are shown in Australian currency, the value represents the f.o.b. value at port of shipment plus the statutory 10 per centum imposed for value for duty purposes expressed in Australian currency.

The value of goods from countries other than the United Kingdom which were adversely affected by the preferential provisions of the Tariff amounted to £A23,091,366 and the duty collected thereon was £A6,427,163 or £A3,925,027 more than would have been paid under the British Preferential Tariff Rates.

The following table shows the effect of the Preferential provisions of the Customs Tariff on imports of goods affected favorably or adversely by the British Preferential Tariff during the years 1937–38 to 1939–40 :—

EFFECT OF THE PREFERENTIAL PROVISIONS OF THE CUSTOMS TARIFF.

IMPORTS OF GOODS AFFECTED FAVORABLY OR ADVERSELY BY THE BRITISH PREFERENTIAL TARIFF.

Particulars.		United Kingdom.			Other Countries.(*a*)		
		1937–38.	1938–39.	1939–40.	1937–38.	1938–39.	1939–40.
GOODS OF A KIND WHICH WERE " FREE ", IF FROM UNITED KINGDOM.							
Value of goods cleared for consumption	£A.	25,040,517	19,095,649	20,157,570	12,983,535	10,530,878	9,810,413
Amount of Duty collected thereon	£A.	..	..	..	1,600,664	1,415,247	1,265,533
Average ad valorem rate of Duty collected ..	%	..	..	..	12.3	13.4	12.9
Duty which would have been collected under General Tariff rates ..	£A.	3,213,203	2,474,807	2,550,415	..	..	..
Average ad valorem rate of Duty which would have been collected under General Tariff rates ..	%	12.8	13.0	12.7	..	..	..
GOODS OF A KIND WHICH WERE " DUTIABLE ", IF FROM UNITED KINGDOM.							
Value of goods cleared for consumption	£A.	28,058,500	24,586,678	27,510,616	14,253,772	12,305,081	13,280,953
Amount of Duty collected thereon	£A.	4,312,158*b*	3,916,726*b*	4,217,357*b*	5,753,250	4,988,493	5,161,630
Average ad valorem rate of Duty collected ..	%	15.4	15.9	15.4	40.4	40.5	38.8
Duty which would have been collected on United Kingdom goods under General Tariff rates ..	£A.	11,195,361	10,012,544	10,856,244	..	..	..
Average ad valorem rate of Duty which would have been collected under General Tariff rates ..	%	39.9	40.7	39.5	..	..	..
Duty which would have been collected on goods of Other Countries under British Preferential Tariff	£A.	..	..	..	2,358,432*b*	2,086,998*b*	2,502,136*b*
Average ad valorem rate of Duty which would have been collected under British Preferential Tariff	%	..	..	..	16.6	16.9	18.8
Amount of Rebate on United Kingdom goods as against General Tariff rates	£A.	6,883,203*b*	6,095,818*b*	6,638,887*b*	..	..	..
Average ad valorem rate of Rebate on United Kingdom goods	%	24.5	24.8	24.1	..	..	..
Amount of Surcharge on goods from Other Countries as against British Preferential Tariff rates	£A.	..	..	..	3,394,818*b*	2,901,495*b*	2,659,494*b*
Average ad valorem rate of Surcharge on goods of Other Countries ..	%	..	..	..	23.8	23.6	20.0

(*a*) Goods cleared under " General Tariff ". (*b*) In computing this amount, account has been taken of the effect of the Exchange Adjustment Act on the margin of British Preference.

EFFECT OF THE PREFERENTIAL PROVISIONS OF THE CUSTOMS TARIFF—*continued.*

Particulars.		United Kingdom.			Other Countries.(*a*)		
		1937–38.	1938–39.	1939–40.	1937–38.	1938–39.	1939–40.
TOTAL GOODS—" FREE " AND " DUTIABLE ", AFFECTED BY THE BRITISH PREFERENTIAL TARIFF.							
Value of goods cleared for consumption	£A.	53,099,017	43,682,327	47,668,186	27,237,307	22,835,959	23,091,366
Amount of Duty collected thereon	£A.	4,312,158*b*	3,916,726*b*	4,217,357*b*	7,353,914	6,403,740	6,427,163
Average ad valorem rate of Duty collected ..	%	8.1	9.0	8.8	27.0	28.0	27.8
Duty which would have been collected on United Kingdom goods under General Tariff rates ..	£A.	14,408,564	12,487,351	13,406,659	..	..	..
Average ad valorem rate of Duty which would have been collected under General Tariff rates ..	%	27.1	28.6	28.1	..	..	..
Duty which would have been collected on goods of Other Countries under British Preferential Tariff	£A.	..	..	..	2,358,432*b*	2,086,998*b*	2,502,136*b*
Average ad valorem rate of Duty which would have been collected under British Preferential Tariff	%	..	..	..	8.7	9.1	10.8
Amount of Rebate on United Kingdom goods as against General Tariff rates	£A.	10,096,406*b*	8,570,625*b*	9,189,302*b*	..	..	..
Average ad valorem rate of Rebate on United Kingdom goods	%	19.0	19.6	19.3	..	..	..
Amount of Surcharge on goods from other Countries as against British Preferential rates	£A.	..	..	..	4,995,482*b*	4,316,742*b*	3,925,027*b*
Average ad valorem rate of Surcharge on goods of Other Countries ..	%	..	..	..	18.3	18.9	17.0

(*a*) Goods cleared under " General Tariff. " (*b*) In computing this amount, account has been taken of the effect of the Exchange Adjustment Act on the margin of British Preference.

(ii) *Intermediate Tariff Preference.* The Intermediate Tariff came into operation on 1st January, 1937, and during the year ended 30th June, 1940, was applicable wholly or in part to about 140 tariff items. In the period mentioned goods from " Proclaimed Countries " (i.e., foreign countries entitled to most-favoured-nation treatment) cleared at intermediate rates of duty were valued at £A7,349,895 on which £A2,128,775 duty was collected. Under the General Tariff the same goods would have paid £A3,806,054 duty or £A1,677,279 more than was paid at intermediate rates, representing an additional duty of 22.8 per cent. on the value of the goods. At British preferential rates of duty the same goods would have paid £A831,807 or £A1,296.968 less than was paid at intermediate rates, a reduction equivalent to an ad valorem duty of 17.7 per cent.

(iii) *Exchange Adjustment.* The Customs Tariff (Exchange Adjustment) Act 1933-1939 provides for adjustments in Duties of Customs consequent upon depreciation in the value of Australian currency relative to sterling. This Act came into operation on 5th October, 1933, but subsequent amendments have extended the list of items affected. The application of Section 5 of the Act is explained hereunder :—

The deduction to be made from duty in respect of protected goods (covered by items) specified in the schedule to the Act and admissible under the British Preferential Tariff on account of the depreciation of Australian currency in relation to the currency of the British country exporting the protected goods to Australia will depend on :—

(*a*) Whether the extent of depreciation is not less than 16⅔ per cent. ; or
(*b*) Whether the extent of depreciation is not less than $11^{1}/_{9}$ per cent., and less than 16⅔ per cent.

If (*a*) applies, the deduction from the amount of duty will be—(i) one-fourth of the amount of duty ; or (ii) 12½ per cent. (⅛) of the value for duty, whichever is the less :

If (*b*) applies, the deduction will be (i) one-eighth of the amount of duty ; or (ii) 6¼ per cent. of the value for duty, whichever is the less. The telegraphic transfer (buying) rate shall determine the extent of depreciation of Australian currency.

Prior to 1933–34 the Tariff Board had recommended rates of duty as though exchange was at par, but early in the year mentioned, the Board decided to change the basis of its recommendations and has since shown its findings under the following headings :—

(*a*) The rates which would prove reasonable and adequate under existing conditions of exchange.
(*b*) An estimate as closely as can be made of the rates which would be reasonable and adequate if exchange suddenly reverted to par.
(*c*) The scale of adjustment necessary to meet conditions of exchange between parity and the present adverse rate of 25 per cent.

In tariff proposals introduced on 6th December, 1934, and later, the new basis has been adopted in fixing rates of duty on certain items in accordance with the Board's recommendations as set out in (*a*) with provision for the adjustment of rates of duty as set out in (*c*). With respect to such items the deductions under the provisions of the Exchange Adjustment Act will cease to apply. The Exchange Adjustment Act 1933–39 ceased to operate on and after 15th November, 1947 as a result of the Customs Tariff (Exchange Adjustment) Proposals No. 1.

(iv) *Papua and New Guinea Preference.* The Customs Tariff (Papua and New Guinea Preference) Act 1936 which repealed the Act of 1934 provides for Customs Preference on goods the produce of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia direct from the Territory of Papua or the Territory of New Guinea, of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, shall, notwithstanding anything contained in the Customs Tariff 1933–1939 be free of duty. The goods specified in the schedule to the Customs Tariff (Papua and New Guinea Preference) 1936 are coffee, dried lychee fruit, various native fresh fruits, edible fungi, green and dry ginger, coco-nuts, Rangoon beans, kapok and sesame seeds, areca nuts, cocoa beans, massoi oil, nuts (edible), sago, tapioca, spices, vanilla beans and gums. Total imports from Papua during 1939–40 amounted to £A577,442 (including gold, £A109,551), imports of goods entitled to preference to £A73,086, and duties remitted to £A50,134. Total imports from the Territory of New Guinea during 1939–40 amounted to £A3,088,699 (including gold £A2,848,582), imports of goods entitled to preference to £A105,206, and the duties remitted to £A54,770.

4. **Primage Duty.**—From 10th July, 1930 a primage duty of 2½ per cent. ad valorem was imposed on all goods whether dutiable or not dutiable, in addition to the duties collected in accordance with the Customs Tariff 1921–1930, excepting bullion, specie, radium and certain special governmental and other imports. The rate of primage duty was subsequently increased to 4 per cent. as from 6th November, 1930.

A proclamation of 14th May, 1931, exempted certain aids to primary production, and on 11th July, 1931 a further amendment, in addition to extending the list of these goods and also exempting some minor imports from primage duty, provided for a rate of 4 per cent. ad valorem on a few other items, mainly aids to production, and increased the ad valorem rate of primage duty to 10 per cent. on all other articles imported. Amendments promulgated since 11th July, 1931 have greatly increased the list of goods exempt from primage duty.

The Customs Tariff (Primage Duties) Act 1934 imposed primage duty at rates of 4, 5, and 10 per cent. and provided for preferential treatment of certain goods admitted under the British Preferential Tariff. A proclamation of 12th December, 1934, exempted from primage duty goods the produce or manufacture of Fiji and a proclamation of 25th September, 1935, exempted from primage duty goods the produce or manufacture of the Territories of New Guinea and Papua. Under the Customs Tariff (New Zealand Preference) Act goods the produce or manufacture of New Zealand are exempt from primage duty. Similarly under the Norfolk Island Act 1913 goods the produce or manufacture of Norfolk Island are exempt from primage duty.

Customs proclamations, which came into force on 1st January, 1937, and later dates, provide in respect of specified tariff items exemptions from, and reduced rates of 4 and 5 per cent., primage duty on imports the produce or manufacture of " Proclaimed Countries ". All countries whose goods are admissible to Australia under the intermediate customs tariff rank as proclaimed countries and include the United Kingdom, the Dominions and Colonies, the United States of America (from 18th February, 1943), and most foreign countries. Customs proclamations operative from 19th November, 1947 provided for exemption of additional tariff items from primage duty.

In 1939–40 the value of goods from the United Kingdom admitted under British Preferential Tariff rates was, in Australian currency, £A47,668,186 and the primage duty paid, £A1,267,431. This amount is £A1,358,275 less than the amount which would have been paid if certain goods had not been subject to preferential rates of primage duty.

5. **Reciprocal Tariffs.**—(i) *United Kingdom.* A reciprocal trade agreement between the United Kingdom and Australia came into force on 14th October, 1932, and is referred to briefly in paragraph 3 above. Broadly speaking Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return Australia incurred obligations to the United Kingdom in respect of Tariff rates and the grant of preferences to United Kingdom goods.

(ii) *Dominion of Canada.* A reciprocal trade agreement between Canada and Australia which came into force on 1st October, 1925, was superseded by a new agreement operating from 3rd August, 1931. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The only exceptions to this general rule were listed in the schedules to the agreement.

Australian commodities to which the British Preferential Tariff does not apply on their importation into Canada are: Butter, brandy, champagne, cheese, currants, eggs, eucalyptus oil, fresh apricots, pears, quinces, nectarines, grapes, oranges and passion fruit, dried prunes, apricots, nectarines, pears and peaches, fruit pulp, fruits in cans, gelatine, hops, rice (uncleaned), meat (fresh and canned), peanuts, raisins, sugar, tallow, veneers and wine.

Canadian commodities to which the British Preferential Tariff does not apply on their importation into Australia are: Carbide of calcium, cash registers, corsets, fish, gloves, goloshes and rubber sand boots, etc., piece goods, iron and steel tubes or pipes, printing machinery, barbed wire, paper (printing, typewriting and writing), timber, typewriters, vacuum cleaners and vehicles—motor chassis (unassembled and assembled)—and vehicle parts but not including bodies, gears, rubber tyres and tubes, storage batteries, shock absorbers, bumper bars, sparking plugs and springs.

Certain administrative provisions, including a special concession to Canada in respect of the inland freight charges to be included in the dutiable value of Canadian goods on importation into Australia, were incorporated in the agreement.

The Customs Tariff (Canadian Preference) Acts 1931 and 1934–1939 give effect to the agreement so far as Australia is concerned.

During 1939–40 the imports from Canada amounted in Australian currency to £A11,393,568 and imports of Canadian origin entitled to preference were valued at £A9,984,914, the principal items being printing paper. £A1,946,849; motor chassis and parts, £A1,878,301; timber, £A986,221; fish, £A531,590; and piece goods, £A429,786. The duty on the total imports of Canadian origin entitled to preference would have been £A3,197,086 under the General Tariff, but by the preferential provisions this was reduced by £A1,913,696, or by 19.2 per cent. on the value of the imports concerned.

Australian exports to Canada subject to preference amounted to approximately £A1,067,411, the items being fruits, dried, £A571,259; sugar, £A1,229,687; fruits, preserved, £A104,980; and tallow, £A61,485.

(iii) *Dominion of New Zealand.* A reciprocal trade agreement between New Zealand and Australia came into force on 1st December, 1933, superseding an earlier agreement of 1922. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The only exceptions to this general rule were listed in the schedules to the agreement.

The Customs Tariff (New Zealand Preference) Act 1933 giving effect to the agreement, repealed earlier acts and provides that duties on all goods specified in the schedule to the Act shall be at the rates indicated therein, and that all goods other than those provided for in the schedule shall be subject to the rates in force under the British Preferential Tariff. An amendment to this Act in 1934 provides that, where the rate of duty upon any class of goods under the New Zealand British Preferential Tariff is less than that operating in Australia under the British Preferential rate, upon request by the New Zealand Government such goods may, after proclamation, be admitted at the lower rate. The rates of duty on goods re-exported from New Zealand (not being goods the produce or manufacture of New Zealand) and which are imported into Australia, and which if they had been imported into Australia direct from the country of origin would have been subject to the rates of duty under the British Preferential Tariff, shall be the rates of duty in force under that tariff.

The Act provides also that films produced in New Zealand by or for the Government of New Zealand for publicity purposes shall be admitted free of duty, also that cocoa beans the produce of Western Samoa shall not be subject to any higher duties than those paid on cocoa beans the produce of any British non-self-governing Colony or Protectorate or any Territory under British mandate. The provisions of the Act do not, however, apply to goods the produce of Cook Islands.

Goods the produce or manufacture of the Dominion of New Zealand are exempt from primage duty.

The conditions of preference in the Act provide that goods shall be deemed to be the produce or manufacture of New Zealand if they conform to the laws and regulations in force in Australia which apply to such goods when imported under the British Preferential Tariff (*vide* section 151A of Customs Act 1901–1936) except that goods not wholly produced or manufactured in New Zealand need not contain more than 50 per cent. of New Zealand labour and/or material in their factory or works cost, instead of 75 per cent. under the conditions of the United Kingdom preference.

Of the total imports of £A1,823,336 from New Zealand during 1939–40 it is estimated that goods otherwise dutiable amounting in value to £A465,450 were admitted free under the provisions of the Preferential Tariff and the duty thus remitted was £A169,368. In addition, goods valued at £A49,217 were admitted under the preferential rates of duty, the duty remitted on such goods being £A10,291. The total of the duties remitted on the import of New Zealand goods was thus £A179,659, representing a margin of preference of 34.9 per cent. on the value of the goods entitled to preference. The principal items which benefited under the preferential provisions were fish, valued at £A115,482, and undressed timber, £A170,463, the amounts of duty remitted being £A22,782 and £A117,601 respectively.

(iv) *Newfoundland.* An agreement between Newfoundland and Australia which came into operation on 12th December, 1939, provides for imports of news printing paper the produce or manufacture of Newfoundland to be accorded the benefits of the British Preferential Tariff, and in return the Government of Newfoundland accords exclusive Tariff preference to Australian butter and canned fruits imported into that country.

The agreement was approved by the Trade Agreement (Newfoundland) Act 1939, and effect was given to its provisions so far as Australia is concerned by the Customs Tariff (Newfoundland) Preference Act 1939.

(v) *Southern Rhodesia.* An agreement between Southern Rhodesia and Australia came into operation on 9th April, 1941.

Under the agreement the principal undertakings by the Commonwealth Government were—(*a*) to accord a preferential rate of ninepence per lb. lower than the British Preferential Tariff on unmanufactured tobacco from Southern Rhodesia ; and (*b*) to admit raw asbestos and chrome at rates of duty not higher than those applicable to these products from other countries, and to admit them free of primage duty.

The Southern Rhodesian Government on its part agreed—(*a*) to admit free of duty a schedule of Australian goods comprising 33 items ; (*b*) to accord specified preferential rebates ranging from 10 per cent. to 50 per cent. from the duties applicable to United Kingdom goods on a schedule of Australian goods comprising 19 items ; (*c*) to accord British Preferential Tariff rates to a schedule of Australian goods comprising 14 items and (*d*) to accord similar tariff treatment to Australian wheat and wheat flour, in the event of permits being issued for importation from any other country at rates of duty lower than those accorded to Australia under the agreement.

The Trade Agreement (Southern Rhodesia) Act 1941 approved the agreement, which was given effect to so far as Australia is concerned by the Customs Tariff (Southern Rhodesia Preference) Act 1941.

(vi) *Union of South Africa.* A trade agreement between Australia and the Union of South Africa came into force as from 1st July, 1935.

This agreement provides that the products of the Union of South Africa or of the mandated territory of South-West Africa entering Australia and the products of Australia entering the Union of South Africa or the mandated territory of South West Africa shall be subject to customs duties not higher than those imposed by the importing country on like products from the most favoured foreign nation. A reciprocal tariff arrangement under which products of Mozambique are admitted duty free to the Union of South Africa is exempt from the agreement.

The Trade Agreement (South Africa) Act 1936 approves the terms of this agreement.

6. **Trade Agreements.**—Trade agreements between the Commonwealth Government and the Governments of Belgium, Czechoslovakia and France were in operation prior to the outbreak of war in September, 1939, but were inoperative during the war, owing to the provisions of the Trading with the Enemy Act 1939–1940. These agreements are again in full force.

Since 1st July, 1935 a trade agreement has been in force between Australia and the Union of South Africa.

The trade agreement concluded in 1938 between Australia and Switzerland continued in limited operation during the war period.

Between December, 1939 and April, 1944 the Commonwealth Government also entered into trade agreements with the following countries :—Newfoundland, Brazil, Greece and Southern Rhodesia.

Summaries of the texts of these agreements appeared in previous issues of the Official Year Book.

7. **International Trade Discussions and Tariff Negotiations 1946–1948.**—The deliberations of the International Conference on Trade and Employment have an important bearing on Australia's future trade relations with other countries.

The origin of these discussions is found in the principles enunciated in Article VII. of the Mutual Aid Agreement between the Government of the United Kingdom and the United States of America, which reads as follows :—

> " In the final determination of the benefits to be provided to the United States of America by the Government of the United Kingdom in return for aid furnished under the Act of Congress of the 11th March, 1941, the terms and conditions thereof shall be such as not to burden commerce between the two countries, but to promote mutually advantageous economic relations between them and the betterment of world wide economic relations. To that end they shall include provision for agreed action by the United States of America and the United Kingdom, open to participation by all other countries of like mind, directed to the expansion, by appropriate international and domestic measures, of production,

> employment, and the exchange and consumption of goods, which are the material foundations of the liberty and welfare of all peoples; to the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers; and, in general, to the attainment of all the economic objectives set forth in the joint declaration made on the 12th August, 1941, by the President of the United States of America and the Prime Minister of the United Kingdom."
>
> "At an early convenient date, conversations shall be begun between the two Governments with a view to determining, in the light of governing economic conditions, the best means of attaining the above-stated objectives by their own agreed action and of seeking the agreed action of other like-minded Governments."

This Article is linked with the terms of the Atlantic Charter and has particular reference to Clauses 4 and 5, which state the common principles in the national policies of the United Kingdom and the United States of America in relation to trade and international economic relations. The paragraphs referred to read as follows:—

> "(4) They will endeavour, with due respect to their existing obligations, to further the enjoyment by all States, great or small, victor or vanquished, of access on equal terms to trade and raw materials of the world which are needed for their economic prosperity.
>
> (5) They desire to bring about a full collaboration between all nations in the economic field, with the object of securing for all improved labour standards, economic advancement and social security."

The Commonwealth Government subscribed to these principles in an Exchange of Notes made on 3rd September, 1942, between the Australian Minister at Washington and the United States Secretary of State, which formed also the basis of the Australian Reciprocal Aid Agreement with the United States of America.

The first step towards the implementation of these principles in the field of international trade was taken in December, 1945, when the Government of the United States of America issued an invitation to a number of the leading trading nations of the world (including Australia) to participate in two sets of preliminary negotiations. One was designed to discuss a draft Charter prepared by the Government of the United States of America and entitled "Proposals for Expansion of World Trade and Employment." The other proposed negotiations were for the purpose of giving practical effect to the policy of expanding international trade by bringing about a series of mutually advantageous trade agreements.

The conference did not eventuate at the time fixed, but after the establishment of the United Nations Organization the first subject of negotiation (viz. the Charter) was brought under the auspices of the United Nations by the acceptance of a resolution proposed by the United States of America at the First Meeting of the Economic and Social Council in February, 1946. The Council established a Preparatory Committee to elaborate an annotated draft agenda for consideration by a World Conference on Trade and Employment. The Committee comprised the United Kingdom, United States of America, France, Belgium, Netherlands, Luxembourg, Norway, Czechoslovakia, Lebanon, Canada, India, South Africa, New Zealand, Australia, China, Cuba, Brazil and Chile. The U.S.S.R. had been invited but did not participate.

The first meeting of the Preparatory Committee was convened for October, 1946, in London and, in July, 1946, the United States Government issued an amendment of its previous proposals in the form of a "Suggested Draft Charter for an International Trade Organization of the United Nations."

Broadly speaking, the proposals embodied in the draft aimed at implementing the principles enunciated in Article VII. of the various Mutual Aid Agreements and in the Atlantic Charter and contemplated—

(1) The establishment of an International Trade Organization;
(2) the modification of restrictive trade barriers; and
(3) the development of agreed rules of conduct in regard to matters affecting international trade.

The object was to raise living standards in all the countries of the world by the promotion of a high level of employment and the expansion of world trade.

At its first meeting in London in October, 1946, the Preparatory Committee discussed generally the Articles of the Draft Charter. Various amendments were proposed and, as a result, it was necessary for the Preparatory Committee to appoint a Drafting Committee, which met in New York in January and February, 1947, and incorporated in the Draft Charter the alterations suggested at the London discussions.

The text of the Drafting Committee's revised Charter became the basis for discussion by the Preparatory Committee in its Second and Final Preparatory Session held in Geneva during May-October, 1947. The Charter as further revised during that session was laid before the World Conference on Trade and Employment, which commenced in Havana in November, 1947.

The Draft Charter considered at Havana covers a very extensive range of subjects connected with the rules and conduct of international trade. It is divided into nine chapters covering the purposes and objectives of the proposed International Trade Organization, employment and economic activity, economic development, commercial policy, restrictive business practices, intergovernmental commodity arrangements, treatment of non-members and the administrative arrangements for the organization itself.

Other features of the draft Charter from the view-point of Australia are (1) that provision is made for the preservation of the existing British Preferential Tariff System and (2) present Australian stabilization schemes for the marketing of primary produce are permitted to continue. In addition, the proposed International Trade Organization will provide a forum for the consideration of common problems in a conciliatory spirit ; the principles of multilateral trade are in contrast to the trading *blocs* of the " thirties " and in conjunction with tariff reductions the balance of trade with the dollar area will tend to be restored by weakening restrictions on imports into the United States of America.

The Final Act of the United Nations Conference on Trade and Employment was signed in Havana by the representatives of fifty-three nations on 24th March, 1948. The Charter will be submitted to the Governments represented at the Conference, and must be approved by a majority of these before it comes into operation.

Towards the end of 1946 the Governments of a number of countries comprising the Preparatory Committee felt that the other discussions proposed by the United States of America in December, 1945 (viz. those directed at the policy of expanding international trade by bringing about a series of mutually advantageous trade agreements) were an interdependent part of the Charter negotiations. In consequence they were also brought under the auspices of the United Nations on the recommendation of the First Session of the Preparatory Committee.

As a result thereof on 10th April, 1947 (about a month prior to the resumption of the Charter discussions) the member nations of the Preparatory Committee engaged in negotiations with the object of arriving at a satisfactory basis on which the reduction of tariff barriers could be effected.

The Tariff negotiations were kept quite distinct from the Charter discussions as the aim was to bring the results into effect without necessarily awaiting the establishment of the International Trade Organization.

The results of the negotiations were incorporated in a draft General Agreement on Tariffs and Trade which was tabled in the House of Representatives on the 18th November, 1947, together with the tariff schedules implementing the tariff reductions which Australia had undertaken to afford.

A Protocol of Provisional Application provided that upon signature by Australia, Belgium, Canada, France, Luxembourg, the Netherlands, the United Kingdom and the United States of America not later than 15th November, 1947, those countries undertook to apply provisionally on and after the 1st January, 1948—

(1) Parts I. and III. of the Agreement,

(2) Part II. of the Agreement to the fullest extent not inconsistent with existing legislation in their respective countries.

These conditions were satisfied and the Agreement is provisionally in force. Tariff reductions undertaken by Australia operated from the 19th November, 1947.

Subject to the qualification in the following paragraph the agreement does not come definitively into force until 30 days after instruments of acceptance have been lodged by countries accounting for 85 per cent. of the total external trade of the countries signatory to the Final Act. The percentage is to be calculated in accordance with a table set out in Annexe H to the Agreement.

Notwithstanding the foregoing the Agreement was not in any event to become fully operative until 60 days after the conclusion of the Havana discussions. Since many of the provisions of the Agreement are almost identical with corresponding provisions in the Charter an Article provides that the Agreement shall not enter into full force and effect until the provisions of the Charter have been definitely settled and agreement has been reached as to whether the provisions of the Agreement or the corresponding provisions of the Charter shall prevail. Subject to the foregoing the Agreement provides that Article I. and Part II. of it shall be superseded when corresponding portions of the Charter come into operation.

If finally ratified, the Agreement will run until 1st January, 1951, but will continue thereafter unless it is specifically terminated.

The Agreement, which is in three parts, contains, briefly—

Part I. Schedules of negotiated tariff reductions and an undertaking to extend most-favoured-nation treatment to other participating countries except where existing preferences are deemed valid.

Part II. Undertakings regarding commercial policy to prevent tariff concessions being offset by other protective measures.

Rights are preserved, however, to—

(1) Impose new duties for protective purposes except in respect of commodities where rates of duty have been bound under the general agreement;

(2) impose import restrictions to protect the balance of payments;

(3) take emergency action where any industry is endangered by any negotiated tariff or preference reduction.

Part III. Mainly machinery provisions.

Under the tariff negotiations associated with the Agreement concessions were offered to Australia on almost all the principal products of which Australia is an actual or potential exporter to the individual countries concerned. Generally the offers were made directly to Australia, but in some cases benefits will arise indirectly from concessions granted to third countries which are more important suppliers of the particular product. These latter benefits occur through the operation of the most-favoured-nation principle.

8. **Customs (Import Licensing) Regulations.**—The Customs (Import Licensing) Regulations, which were promulgated on 1st December, 1939, were originally applied only to imports from countries outside the sterling area. The primary object was to eliminate non-essential items from Australia's import trade with non-sterling countries in order to conserve foreign exchange.

Some items were placed on the totally prohibited list while others were limited to a percentage of either the value or quantity of imports in the pre-war year 1938–39. Certain classes of goods, such as machinery, which could not be conveniently rationed on a quota basis, were placed " under administrative control ", each application being dealt with on its merits without reference to past importations.

The restrictions applied to the importation of non-essential goods were progressively tightened after the regulations were first introduced and many more classes of goods were added to the list of items subject to " total prohibition " and " administrative control.'

Since December, 1941, and consequent upon changes in the general war situation and the intensification of the Australian war effort, an increasing range of goods imported from the United Kingdom and other sterling countries was brought within the scope of the licensing regulations. The extension of the restrictions to sterling goods was a necessary corollary to the measures adopted in Australia and throughout the British Commonwealth to divert man-power, machinery and raw materials to war production. Conservation of shipping space was also an important consideration.

Since the conclusion of hostilities, in accordance with the Government policy of relaxing restrictions where possible, a number of import restrictions, particularly on goods of sterling origin, has been removed or modified. The extensive housing programme, in particular, calls for the importation of a number of items such as furnishings, carpets and various earthenware products not available locally in sufficient quantities. These are among the items on which import restrictions have been modified but the full effects will not be felt until the supply situation in overseas countries becomes easier and the shipping situation improves.

9. **Export Control.**—(i) *General.* Powers for the normal measures of control or supervision over exports are conferred by section 112 (1) of the Customs Act and they provide for the prohibition of the exportation of arms, explosives and military and naval stores, and of any goods—

(*a*) the exportation of which would be harmful to the Commonwealth ;
(*b*) the prohibition of the exportation of which is necessary for the preservation of the flora or fauna of Australia ;
(*c*) in order to preserve the standard and quality of Australian goods for export ;
(*d*) the prohibition of the exportation of which is necessary for the protection of the revenue or the prevention of fraud or deception.

Action has been taken under these powers to prohibit the exportation of a large range of goods and these prohibitions apply at all times. They may be general, or restricted and absolute, or conditional.

In addition to these normal measures, restrictions were imposed on the exportation of goods during the war years and many have been continued in the post-war period. These restrictions provided for both monetary and commodity controls and are explained hereunder.

(ii) *Monetary Control.* As an integral part of the framework of exchange control, a control over goods exported from Australia was introduced in 1939 by the promulgation of the Customs (Overseas Exchange) Regulations which were subsequently superseded by Part IIA. of the National Security (Exchange Control) Regulations in December, 1943. The objectives were to ensure that—

(*a*) The overseas funds accruing from the exportation of goods were made available to the Australian banking system ; and
(*b*) payment for goods exported was made in the currency and the manner prescribed by the Commonwealth Bank of Australia.

On the conclusion of the war it was decided to continue exchange control measures and provision was made in the Banking Act 1945, to enable the introduction of the necessary regulations. On 19th December, 1946, the Banking (Foreign Exchange) Regulations were promulgated and Part III. of these regulations now authorizes the control previously exercised under Part IIA. of the National Security (Exchange Control) Regulations.

Under Regulation 16 of the Banking (Foreign Exchange) Regulations the exportation of any goods is prohibited unless a licence to export has been granted under the regulations or the goods are excepted from the application of the regulations. Provision is made for the granting of export licences subject to such terms and conditions as may be imposed. On the receipt in Australia by the Commonwealth Bank, or by a Bank acting as its agent, of advice that foreign currency has been paid to the Commonwealth Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank or agent of the Bank pays the licensee, or such other person as may be entitled to receive it, an amount in Australian currency equivalent to the foreign currency received.

In addition to commercial transactions, exports by private individuals are rigidly controlled and in the case of persons leaving Australia for overseas a restriction applies to the value of specified articles of jewellery and other effects of high intrinsic value which they are permitted to take with them. Their baggage is subject to the regulations and must be covered by export licences and, in the case of restricted goods, by export permits also.

(iii) *Commodity Control.* For various reasons, the principal of which were—

(*a*) To conserve supplies of essential commodities for Australia's requirements ;

(*b*) to implement price determinations ;

(*c*) to control exports of goods which are the subject of Empire Marketing Agreements ; and

(*d*) to strengthen the control of the exportation of capital in the form of goods, instituted by Part III. of the Banking (Foreign Exchange) Regulations,

a large range of commodities was prohibited from exportation (unless the consent of the Minister for Trade and Customs was first obtained) by proclamation promulgated under section 112 (1A.) of the Customs Act.

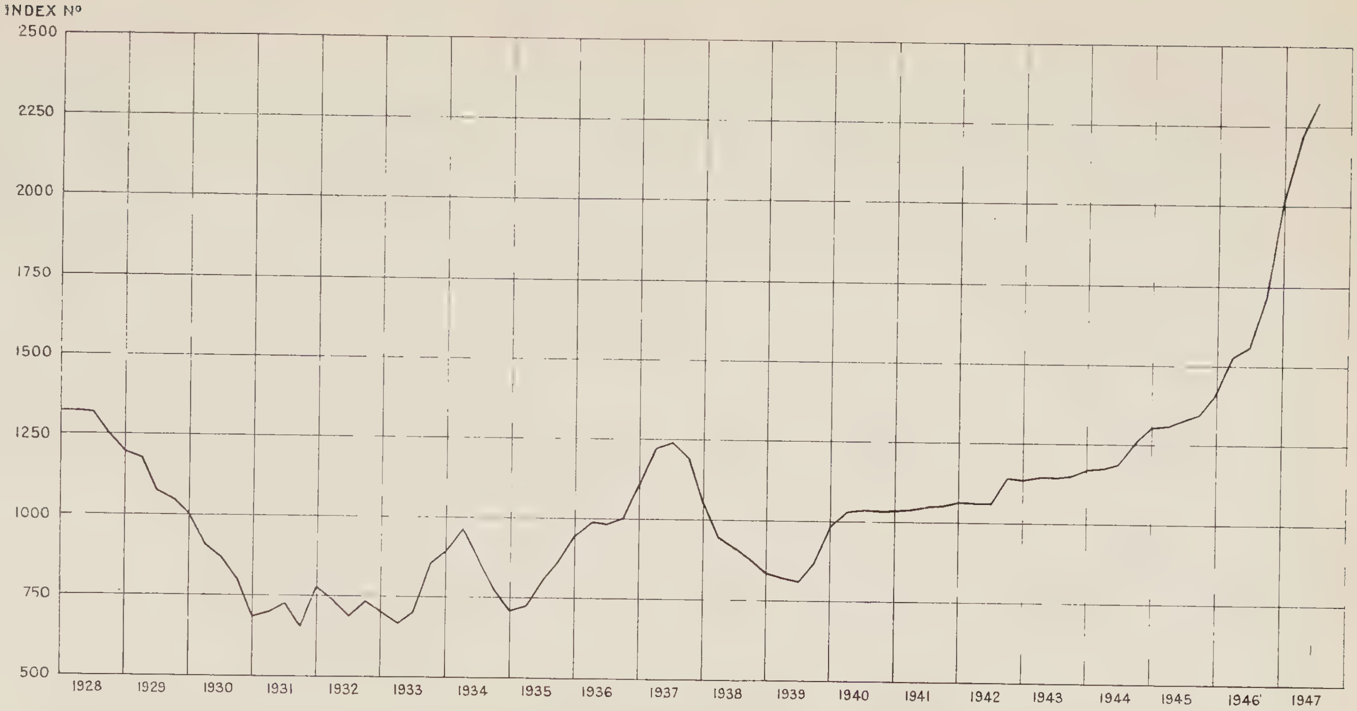
In cases where consent to exportation was given an export permit known as a restricted goods permit was issued. Consent was freely given for the exportation to British and Allied countries and to other approved destinations of goods under commodity control if they were available for export. In the case of exports to neutral countries, special precautions, apart from any other control measures, were taken to ensure that the goods did not become contraband by re-exportation to enemy territory, and to prevent any possible trading with the enemy. These special precautions included consignee control and guarantees against re-export.

Some 1,000 kinds or classes of goods were proclaimed as prohibited exports under section 112 (1A.) of the Customs Act after the outbreak of war in 1939, but, as the supply position improved in respect of any of the goods prohibited from export with the object of conserving supplies, the prohibition was removed or relaxed. The continuance of price control and a world shortage in the supplies of many essential commodities have necessitated continued export control of many goods in the early post-war period. The position is, however, under constant review so as to ensure that restrictions are being removed or modified as rapidly as conditions permit.

10. **Industries Preservation.**—The Customs Tariff (Industries Preservation) Act 1921-1936 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry :—In the case of goods sold for export to Australia at a price less than the fair market price for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and a fair market price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate : and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

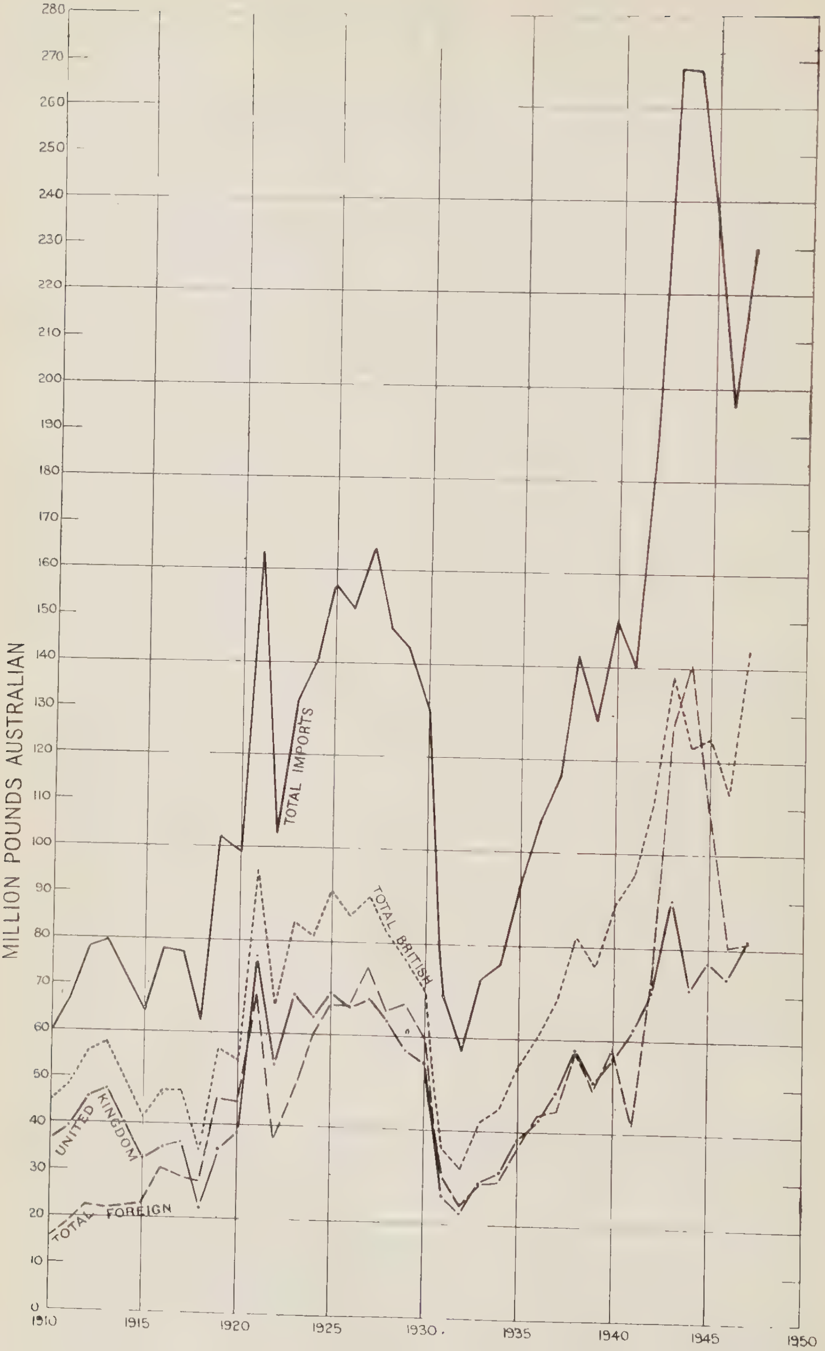
The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Government Gazette* specifying the goods upon which special rates of duty under this Act shall be charged and collected. Several amendments of the Act were recommended by the Tariff Board and put into effect by the Customs Tariff (Industries Preservation) Act 1922. The Customs Tariff (Industries Preservation) Act 1933 repeals section 8 of Act 1921–1922 and provides new clauses relating to Exchange Special Duty.

EXPORT PRICES INDEX-NUMBERS—AUSTRALIA, 1928 TO 1947.

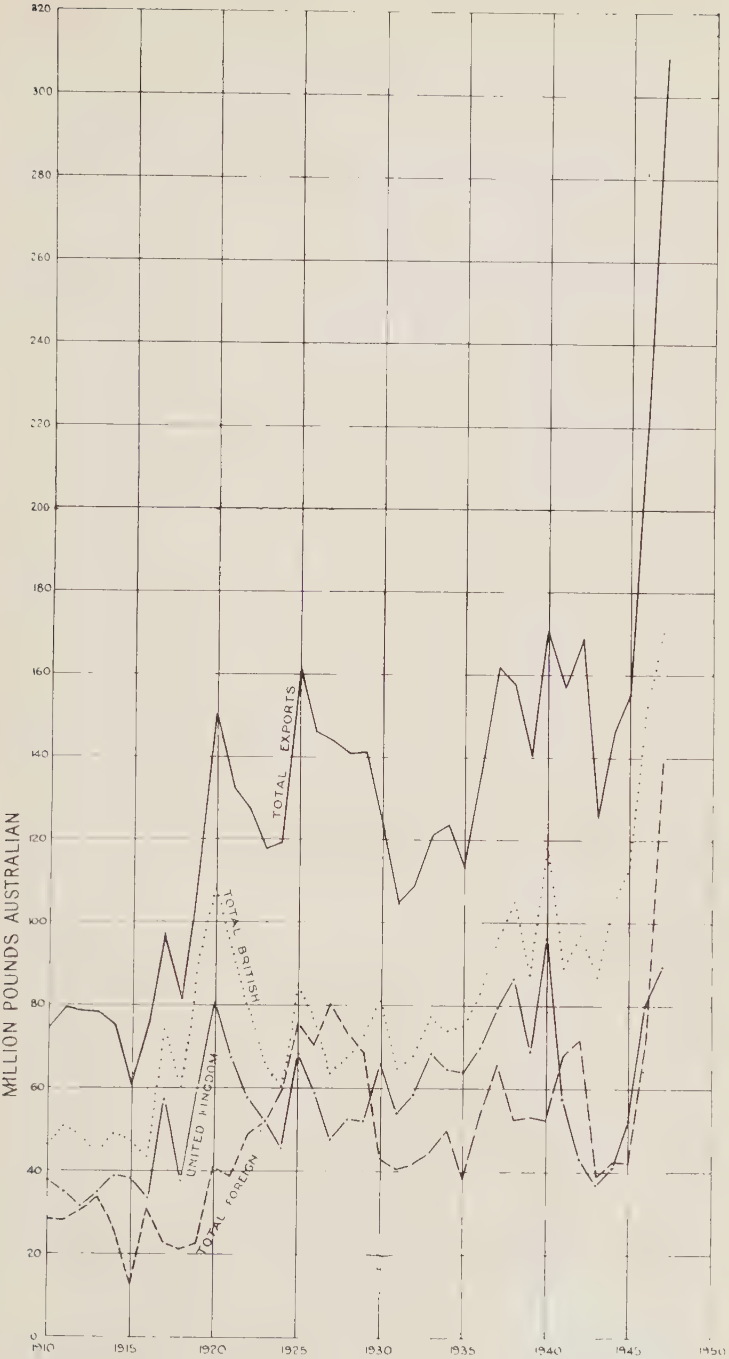


EXPLANATION.—This graph represents the Fixed Base series of Export Price Index-Numbers computed quarterly with the average for the three years ended June, 1939 as base (=1,000). Since it was drawn the index-numbers for the years 1945 to 1947 have been amended. The amended index-numbers are shown on page 426.

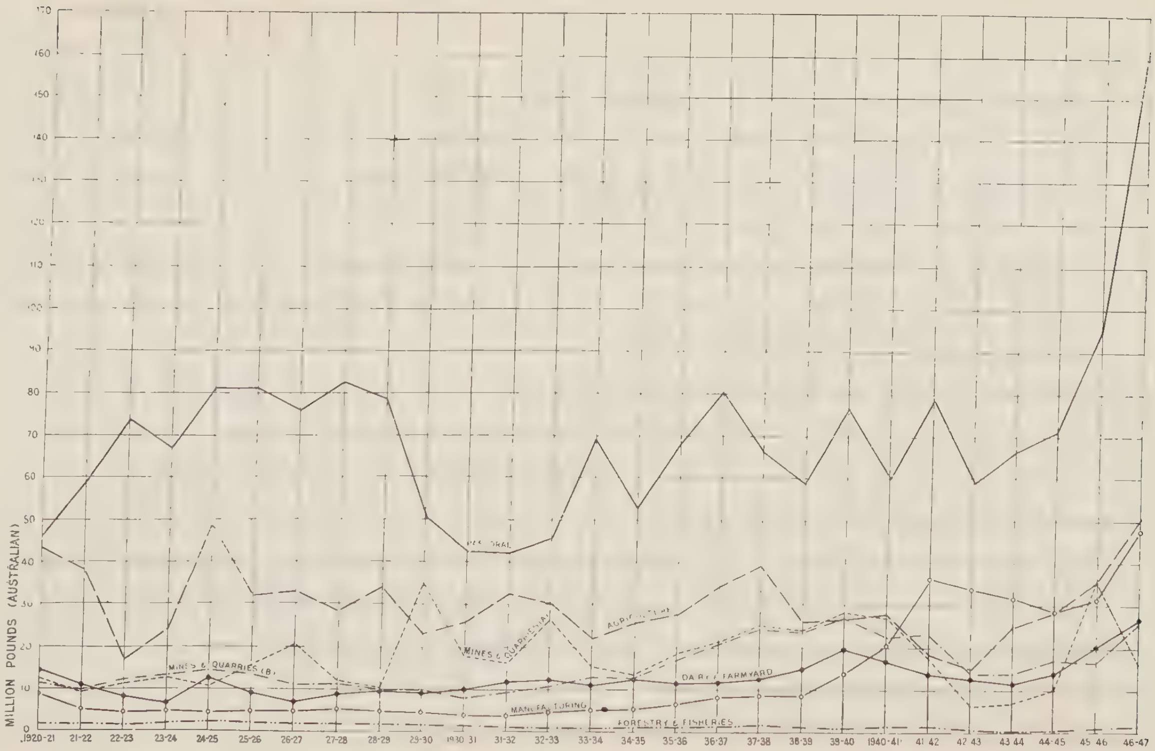
IMPORTS INTO AUSTRALIA, 1910 TO 1947.



EXPORTS FROM AUSTRALIA, 1910 TO 1947.



EXPORTS OF AUSTRALIAN PRODUCTS ACCORDING TO INDUSTRIES, 1920-21 TO 1946-47.



EXPLANATION.—Mines and Quarries (A) represents the total exports of the produce of this industry, including bullion and specie. Mines and Quarries (B) represents the export of products other than gold, to which is added the value of gold produced in the respective years.

11. **Preferential Tariff of the United Kingdom**—(i) *General.* The Tariff of the United Kingdom provides Preferential Customs rates on certain goods where it is shown to the satisfaction of the Commissioners of Customs and Excise that such goods have been consigned from and grown, produced, or manufactured in the British Empire. Manufactured articles generally are not entitled to the preferential rates unless a specified percentage of their value is the result of labour within the British Empire. In the Budget submitted to the House of Commons during June, 1925, clauses dealing with increased Imperial preference on Empire-grown tobacco, preserved and dried fruits, jams and jellies, spirits, wine, sugar and hops were proposed and adopted The new rates of duty took effect on 1st July, 1925, excepting that relating to hops, which came into operation on 16th August, 1925.

(ii) *Australian Preference.* The principal items of interest to Australia which are accorded preferential treatment under the Preferential Tariff of the United Kingdom are—Fruits, dried and preserved ; jam ; fruit pulp ; preserved milk ; wine and brandy. Conditions of preference to goods of Australian origin imported into the United Kingdom were revised in the trade agreement signed at the Ottawa Imperial Economic Conference. Increased preference was granted and the list of commodities entitled to preference was extended. This agreement provides for the continuance of the free entry of eggs, poultry, butter, cheese and other milk products the produce of Australia. Article 2 of the agreement provides for the imposition by the British Government of the following duties (specified in Schedule B) on foreign goods :—Wheat in grain, 2s. per quarter (this duty was abolished as a result of the United Kingdom–United States of America trade agreement of 17th November, 1938 ; *see* sub-par. (iii) below) ; butter, 15s. per cwt. ; cheese, 15 per cent. ad valorem ; apples, raw, 4s. 6d. per cwt. ; pears, raw, 4s. 6d. per cwt. ; apples, canned, 3s. 6d. per cwt., in addition to duty in respect of sugar content ; other canned fruits, 15 per cent. ad valorem, in addition to duty in respect of sugar content ; dried fruits, previously dutiable at 7s., 10s. 6d. per cwt. ; eggs in shell, (*a*) not exceeding 14 lb. per 120, 1s. per 120, (*b*) over 14 lb. but not exceeding 17 lb., 1s. 6d. per 120, (*c*) over 17 lb., 1s. 9d. per 120 ; condensed milk, whole, sweetened, 5s. per cwt., in addition to duty in respect of sugar content ; condensed milk, whole, not sweetened, 6s. per cwt. ; milk powder and other preserved milk, not sweetened, 6s. per cwt. ; honey, 5s. per cwt. ; copper, unwrought, whether refined or not, in ingots, bars, etc., 2d. per lb. ; oranges, raw, 3s. 6d. per cwt. from 1st April to 30th November ; grape fruit, raw, 5s. per cwt., from 1st April to 30th November, and grapes (other than hothouse) 1½d. per lb. from 1st February to 30th June. Schedule C provides that the margin of preference on wine not exceeding 27 degrees of proof spirit shall be 2s. per gallon.

The British Government undertakes that the general ad valorem duty of 10 per cent. imposed by section 1 of the Import Duties Act 1932 on the following foreign goods shall not be reduced except with the consent of the Commonwealth Government :—Leather, tallow, canned meat, zinc, lead, barley, wheaten flour, macaroni, dried peas, dressed poultry, casein, eucalyptus oil, meat extracts and essences, copra, sugar of milk, sausage casings, wattle bark, asbestos and dried fruits other than currants.

The duties provided on foreign wheat in grain, copper, lead and zinc are conditional on Empire producers continuing to offer these commodities on first sale in the United Kingdom at prices not exceeding the world price.

During the calendar year 1939 merchandise of Australian origin imported into United Kingdom amounted to £61,984,000. Of this total approximately £32,031,426 represented goods which received preferential tariff treatment over similar goods from foreign countries. If these goods had been subject to the duties imposed on foreign goods it is estimated that they would have paid approximately £5,503,227 more in duty. This represents a rebate of approximately 17.2 per cent. on the value of imports receiving preferential treatment. The main items receiving preference and the amount of the rebates were—Beef, frozen, £3,190,164 (rebate, £573,032) ; other meats, £1,569,246 (rebate, £172,120) ; sugar, £4,449,788 (rebate, £1,327,862) ; wine, £605,562 (rebate, £538,012) ; rice, £200,036 (rebate, £69,809) ; butter, £11,090,254 (rebate, £1,480,090) ; cheese, £958,333 (rebate, £63,889) ; apples, £1,645,285 (rebate, £300,105) ; raisins, £736,129 (rebate, £108,517) ; fruits, tinned, or bottled, £1,184,455 (rebate, £296,114) ;

lead, unwrought, £2,741,429 (rebate, £65,027); leather, £426,894 (rebate, £128,068). The foregoing figures for imports, valued in sterling, have been obtained from the *Annual Statement of the Trade of the United Kingdom* 1939, and the rebate granted has been estimated from rates of duty shown in the Import Duties Act 1932, Ottawa Agreements Act 1932 and the other enactments mentioned above.

The arrangements with the United Kingdom provide for importations of Australian meat to be regulated in accordance with the absorptive capacity of the United Kingdom market. Australian meat importations, excluding canned meats, into the United Kingdom during 1935 to 1947 as compared with the Ottawa agreement year (1931–32) have been as follows :—

Year.	Chilled Beef.	Frozen Beef and Veal.	Frozen Mutton and Lamb.	Pork.
	Cwt. '000.	Cwt. '000.	Cwt. '000.	Cwt. '000.
1931–32	..	1,124	1,488	..
1935	228	1,468	1,784	147
1936	296	1,524	1,496	233
1937	452	1,948	1,883	234
1938	528	1,881	1,940	287
1939	430	1,952	1,657	315
1940	..	2,102	1,759	463
1941	..	996	1,701	631
1942	..	232	1,487	131
1943	..	95	1,855	13
1944	..	93	1,420	289
1945	..	319	1,110	263
1946	..	934	1,025	287
1947	..	2,136	1,045	41

From 1st October, 1939, the United Kingdom Government agreed to purchase a specified quantity of beef, mutton, lamb, veal, pork, and offals from Australia, and to use its best endeavours to lift additional quantities available for export. Reference to these contracts appears in Chapter XIX.—" Pastoral Production ".

(iii) *United Kingdom Trade Agreements.* Trade agreements operative between the United Kingdom and Argentine from 20th November, 1936, and the United Kingdom and the United States of America from 17th November, 1938, were of much interest to Australia as a country dependent on reasonable access to oversea markets for the disposal of its large surplus of agricultural products.

The details of these agreements are shown in earlier Official Year Books (see No. 36, pp. 326–7).

12. **Tariff Board.**—The Tariff Board Act 1921–1934 provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member may be appointed Chairman of the Board. Members of the Board are appointed for a term of not less than one year nor more than three years, and two members may be appointed as a Committee for making special inquiries. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff ; the necessity for new, increased or reduced duties ; the necessity for granting bonuses ; any proposal for the application of the British Preferential Tariff to any part of the British Dominions or any foreign country ; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters :—the classification of goods under

items of the Tariff that provide for admission under By-laws ; the determination of the value of goods for duty ; the general effect of the working of the Customs Tariff and the Excise Tariff ; the fiscal and industrial effects of the Customs laws of the Commonwealth ; the incidence between the rates of duty on raw materials and on finished or partly finished products ; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–1936 shall be taken in public on oath.

The Minister for Trade and Customs, by reference dated 19th May, 1942, called for investigation, report and recommendations from the Board on all aspects of the general problem of the re-establishment of secondary industries as part of the Commonwealth post-war reconstruction plan. In particular it was desired that the Board investigate and make interim and final reports and recommendations on—

(*a*) The extent to which it would be technically possible to adapt for civilian industry plant, equipment, materials and man-power (male and female employees) employed in defence production, and to what extent (so far as could be foreseen) such adaption was likely to be economically desirable.
(*b*) The disposition of surplus plant, equipment and stores of materials from the defence and other industries after the war.
(*c*) Any measures which might be required to facilitate the re-establishment after the war of industries or concerns contracted or closed down during the war.
(*d*) The degree to which any proposals made would solve the problem of the absorption into civilian avocations of members of the Forces.
(*e*) Changes in the organization and structure of Australian secondary industries since 1939 tending to increase industrial concentration, and any action arising therefrom that might be desirable in the interest of consumers.
(*f*) The possible effects of developments in Australia and oversea on the Australian system of encouragement and protection to industry by Tariff and Bounty.
(*g*) Other matters relating to the establishment, diversification, development and location of Australian secondary industries after the war.

Since the reference was made the position was changed by the creation of the Ministry of Post-war Reconstruction and the setting up of the Secondary Industries Commission and the Secondary Industries Division. These instrumentalities are now engaged in surveys of a general character, and action by the Tariff Board under the reference is therefore limited to investigations into specific industries or sections of industries.

The annual report of the Tariff Board for 1945–46 stated that during the year public inquiries were held on the following subjects :—

> Gloves, plastics, timber, die-heads, the publishing industry, pressed metal panels, tyres and tubes and batteries, refrigeration units, magnetic winding wire, felt polishing bobs or wheels, the optical industry, and parts of motor vehicles, tractors and cycles.

During the year 1945-46 fifteen reports were furnished to the Minister for Trade and Customs. Twelve reports were the result of public inquiry, two related to the question of the operation of deferred rates of duty and one on efficiency and costs of production in Australian industries.

Nine references from the Minister for Trade and Customs were on hand on 1st July, 1946, of which five related to Tariff Revisions and three to the question of the present position and future prospects of the Australian plastics industry. No action in relation to one reference was taken owing to changed circumstances.

The 1946–47 annual report of the Tariff Board stated that public inquiries were held on the following subjects :—

> Vacuum cleaners, Wine Export Bounty Act 1930–1944, the optical industry, hog casings, internal combustion engines, questions relating to cancelling of existing by-laws, mercury contact tubes, aluminium and aluminium alloys, metal-working chucks, tariff revision on fasteners and vacuum cleaners, and continuance of bounty on production of tractors and the nature and amount of assistance on plastics and materials therefor.

Sixteen reports were furnished to the Minister for Trade and Customs during the year 1946–47. Twelve reports related to matters of public inquiry, two upon the question of bringing deferred rates of duty into operation, one on the question of granting financial assistance to an Australian manufacturer and one upon the proposed expansion of an industry in Australia.

The work on hand on 1st July, 1947 consisted of fourteen references by the Minister of Trade and Customs but action upon one of these was deferred pending further advice from the Minister.

13. **Trade Descriptions.**—The Commerce (Trade Descriptions) Act 1905 as amended by the Acts of 1926, 1930 and 1933 gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The goods to which a trade description must be applied are :—(*a*) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man ; (*b*) medicines or medicinal preparations for internal or external use ; (*c*) manures ; (*d*) apparel (including boots and shoes), and the materials from which apparel is manufactured ; (*e*) jewellery ; (*f*) seeds and plants ; and (*g*) brushware.

14. **Acts Passed in 1945 and 1946.**—The following Commonwealth Acts relating to Australian production and trade were assented to during the years 1945 and 1946 :—

ACTS PASSED IN 1945.

Drought Relief Act, No. 17 of 1945. An Act to amend the States Grants (Drought Relief) Act 1944, and for other purposes.

Wine Overseas Marketing Act, No. 23 of 1945. An Act to amend the Wine Overseas Marketing Act 1929–1936.

Wool (Contributory Charge) Act, No. 51 of 1945. An Act to impose a Contributory Charge upon certain Wool produced in Australia.

Wool (Contributory Charge) Assessment Act, No. 50 of 1945. An Act relating to the Imposition, Assessment and Collection of a Contributory Charge upon certain Wool produced in Australia, and for other purposes.

Wool Realization Act, No. 49 of 1945. An Act to approve an Agreement between the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand and the Union of South Africa in relation to the disposal of Wool and to provide for the carrying out of the Agreement on the part of the Commonwealth of Australia, and for other purposes.

Wool Tax Act, No. 2 of 1945. An Act to amend the Wool Tax Act, 1936.

Wool Use Promotion Act, No. 3 of 1945. An Act to make provision for Improving the Production and Increasing the Use of Wool.

ACTS PASSED IN 1946.

Sugar Agreement Act, No. 11 of 1946. An Act to approve an Agreement made between His Majesty's Government of the Commonwealth of Australia and His Majesty's Government of the State of Queensland, and for other purposes.

Wheat Industry Stabilization Act, No. 24 of 1946. An Act relating to the Stabilization of the Wheat Industry.

Wheat Export Charge Act, No. 25 of 1946. An Act to impose a Charge upon the Export of Wheat and Wheat Production.

Meat Export Control Act, No. 36 of 1946. An Act to amend the Meat Export Control Act 1935–1938, and for other purposes.

Customs Tariff Validation Act, No. 47 of 1946. An Act to provide for the Validation of Collections of Duties of Customs under Customs Tariff Proposals.

Excise Tariff Validation Act, No. 48 of 1946. An Act to provide for the Validation of Collections of Duties of Excise under Excise Tariff Proposals.

Raw Cotton Bounty Act, No. 51 of 1946. An Act to amend section nine of the Raw Cotton Bounty Act 1940–1941.

Wool Industry Fund Act, No. 52 of 1946. An Act for the application of certain Funds vested in the Australian Wool Realization Commission.

Customs Tariff (Special War Duty) Validation Act, No. 68 of 1946. An Act to amend the Customs Tariff (Special War Duty) Validation Act (No. 2) 1943.

Excise Tariff Validation (No. 2) Act, No. 69 of 1946. An Act to amend the Excise Tariff Validation Act (No. 2) 1943.

Wheat Industry Assistance Act, No. 71 of 1946. An Act to amend the Wheat Industry Assistance Act 1938.

Wheat Tax Act, No. 78 of 1946. An Act to impose a Tax in respect of certain Wheat.

Wheat Export Charge (No. 2) Act, No. 79 of 1946. An Act to amend the Wheat Export Charge Act 1946.

Wheat Industry Stabilization (No. 2) Act, No. 80 of 1946. An Act to amend the Wheat Industry Stabilization Act 1946.

§ 3. Lend-Lease and Mutual Aid between Australia and the United States.

1. **Lend-Lease.**—Particulars of Lend-Lease and Mutual Aid between Australia and the United States of America are given in detail in Official Year Book, No. 36, pp. 331–6.

2. **Lend-Lease Settlement.**—An Agreement between Australia and the United States of America on settlement of Lend-Lease, Reciprocal Aid, Surplus War Property and Claims was signed on 7th June, 1946. The main provisions of the Settlement Agreement were as follows :—

(a) *Lend-Lease and Reciprocal Lend-Lease Supplied up to V.J. Day* (*2nd September*, 1945). In recognition of the mutual war-time benefits received from the interchange of Lend-Lease and Reciprocal Aid the Agreement provided that neither Government would make any payment to the other for Lend-Lease and Reciprocal Aid goods and services used in the achievement of the common victory.

(b) *Lend Lease* " *Pipe-Line* ". The United States Government agreed to complete the transfer to Australia of the goods selected by the Commonwealth Government from those which were in course of Lend-Lease procurement on V.J. Day.

(c) *Reciprocal Aid* " *Pipe-Line* ". The Commonwealth Government agreed to make no charge for any goods transferred to the American Armed Forces between 2nd September, 1945 and 31st December, 1945, which were in the categories previously transferred under Reciprocal Aid.

(*d*) *Overall Payment of* 27,000,000 *Dollars.* The Commonwealth Government agreed to pay to the United States Government the sum of 27,000,000 dollars (approximately £A8,400,000) in consideration of :—

(i) the post-war value of Lend-Lease machine tools ;

(ii) the post-war value of other Lend-Lease capital equipment including specified non-combat aircraft held by the R.A.A.F. ; and

(iii) the transfer of United States Government surplus property to a total value of 6,500,000 dollars (approximately £A2,000,000) in accordance with the terms of the Settlement.

An amount of 20,000,000 dollars (approximately £A6,200,000) has already been paid to the United States Government. The remaining 7,000,000 dollars (approximately £A2,200,000) is to be paid by delivery to the United States Government of title to real property and improvement to real property in Australia to a total value of not more than 2,000,000 dollars (approximately £A620,000) and by establishment of a fund in Australian pounds for expenditure by the United States Government, under agreements to be reached between the two Governments, for carrying out educational and cultural programmes of mutual benefit.

(*e*) *Claims against the United States Government.* The Commonwealth Government agreed to assume responsibility for the settlement of all claims against the United States Government or members of the American Armed Forces arising from acts or omissions occurring before 30th June, 1946, in the course of military duties of members of the American Armed Forces in Australia.

(*f*) *Other Claims.* It was agreed that the settlement should be complete and final and that no further benefits would be sought by either Government in consideration for Lend-Lease, Reciprocal Aid and surplus war property, or for the settlement of claims or other obligations arising out of the war except as specifically provided in the Settlement Agreement.

In the course of a financial statement delivered in the House of Representatives on 12th July, 1946, the Treasurer disclosed that the total value of Lend-Lease received by Australia was about 1,500,000,000 dollars (approximately £A466,000,000) while total Reciprocal Lend-Lease from Australia to the United States was approximately £A285,000,000.

§ 4. Mutual Aid between Canada and Australia.

1. **Canadian Mutual Aid.**—Particulars of the arrangements whereby assistance was given by Canada to Australia during the war years, under the terms of the Canadian Mutual Aid Act, are given in detail in Official Year Book No. 36, pp. 336–8.

2. **Termination of Canadian Mutual Aid.**—The transfer of supplies to Australia under the Canadian Mutual Aid Act ceased on V.J. Day (2nd September, 1945).

In general, title to goods delivered to Australia under Canadian Mutual Aid up to V.J. Day passed to the Commonwealth Government and no financial settlement has been required for them. However, the Canadian Mutual Aid Act did not permit the transfer of title to ships made available under Mutual Aid and in consequence a coastal ship received by Australia from Canada under Mutual Aid provisions was formally returned to the Canadian Government which subsequently declared it surplus and sold it to an Australian Shipping Company.

The final report of the Canadian Mutual Aid Board which administered the provisions of the Canadian Mutual Aid Act gives the following particulars of the goods and services supplied by Canada to Australia during the currency of the Mutual Aid arrangements :—

CANADIAN MUTUAL AID DISBURSEMENTS FOR AUSTRALIA,
NOVEMBER, 1943–1ST SEPTEMBER, 1945.

	Total $ Millions.
Aircraft and parts	12.547
Automotive equipment and mechanical transport	18.237
Armoured vehicles	.428
Chemicals and explosives	.250
Guns and small arms	.442
Shells and ammunition	.006
Merchant vessels, construction and repairs	2.162
Naval vessel equipment	.173
Cloths, clothing and fabrics	.638
Electrical, radio and telephone equipment	3.945
Lumber and other construction material	5.037
Machine tools, stores and miscellaneous	2.152
Aluminium and base metals	.587
Fish and products	.654
Oats	.967
Asbestos	.974
Paper and products	3.535
Fertilizers and chemicals	.964
Farm machinery	.739
Miscellaneous	1.264
Freight—inland and ocean	7.649
British Commonwealth Air Training Plan	27.975
Total	91.325

This total in Australian currency was approximately £A25,700,000.

§ 5. Trade Commissioner Service.

Empire and foreign countries have deemed it necessary in their trade interests to establish generous overseas representation and have for many years maintained extensive overseas trade services.

Prior to 1929, Australian representation abroad was limited to the High Commissioner's Office, in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of overseas trade representation available to Australia was that of the British Overseas Trade Service, a service whose activities are naturally more particularly devoted to the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiation of the Trade Agreement with Canada, in the cultivation of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments both to the Commonwealth Government and the Australian trading community.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows :—(*a*) fostering of goodwill, (*b*) correction and avoidance of misunderstandings, and (*c*) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (*a*) information as to present and prospective demand for goods, (*b*) information as to foreign and local competition, (*c*) advice as to best selling methods, (*d*) reports as to the standing of foreign buyers, (*e*) specification of articles in demand, (*f*) dealing with trade inquiries, (*g*) advice and assistance to commercial visitors regarding trade matters, (*h*) settlement of difficulties between exporters in Australia and buyers abroad, and (*i*) furnishing of information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing particular trading functions, it is the duty of a Trade Commissioner to watch and advise the Government regarding any developments in his Territory affecting not only trade and commerce, but any other matters of concern to his home Government.

Trade Commissioners are drawn either from the commercial world or from the ranks of the Public Service as circumstances dictate. With each Trade Commissioner, however, it is customary to provide an Assistant Trade Commissioner, who is selected to undergo training in the service and qualify at a later stage for appointment as a Trade Commissioner. The staffing arrangements are in this way designed to enable the Government to avail itself of the best procurable executives of either the Public Service or the commercial world and at the same time to build up a first class personnel to carry out a vigorous policy of expansion in connexion with Australia's overseas trade.

The overseas trade representation is shown in Chapter XXVIII.—" Miscellaneous ".

§ 6. Method of Recording Imports and Exports.

1. **Value of Imports.**—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged ad valorem. The value of goods has been taken to be 10 per cent. in advance of their fair market value in the principal markets of the country whence the goods were exported. Acting upon a recommendation of the Tariff Board the section of the Customs Act relating to the valuation of imports was amended, section 154 (1) of the Customs Act 1901–1936 providing that " when any duty was imposed according to value, the value for duty should be the sum of the following :—

- (*a*) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
  - (ii) the current domestic value of the goods, whichever is the higher ;
- (*b*) all charges payable or ordinarily payable for placing the goods free on board at the port of export ; and
- (*c*) ten per centum of the amounts specified under paragraphs (*a*) and (*b*) of this sub-section.

" Current domestic value " is defined as " the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country ".

Until 15th November, 1947, imports were recorded in British currency values, and Section 157 of the Customs Act provided that when the invoice value of imported goods was shown in any currency other than British currency, the equivalent value in British currency should be ascertained according to a fair rate of exchange to be declared in case of doubt by the Minister. Under this section it was the practice of the Department of Trade and Customs, until 8th December, 1920, to convert on the basis of the mint par of exchange. From that date until 15th November, 1947, in consequence of a ruling of the High Court, all conversions were based on the commercial rates of exchange.

The value for duty under the Customs Act 1901–1936 was amended on the 15th November, 1947 by the deletion of Section (*c*) mentioned above and the valuation of imports under Section 157 of the Customs Act was amended by substituting "Australian" for "British" currency.

As a result of this amendment to the Customs Act all import tables shown in the sections following have been expressed in the Australian equivalent of the recorded sterling values.

2. **Value of Exports.**—Prior to 1st July, 1929, the recorded value of all goods exported was taken as representing the value in the principal markets of Australia in the ordinary commercial acceptation of the term. Owing to the inflated values arbitrarily allotted in recent years to commodities which are subject to governmental control or subsidy, some change in the practice of valuation of exports of such commodities became desirable. Accordingly a new basis was adopted, as from 1st July, 1929, for the statistical valuation of exports of sugar, butter and goods on which bounty or rebate was paid, which would show for (*a*) *Sugar*—the value f.o.b. at which sold to oversea buyers, or a f.o.b. value equal to the London market price if shipped on consignment; (*b*) *Goods on which bounty or rebate was paid on export*—the value in the principal markets of Australia in the ordinary commercial acceptation of the term, less the value of any bounty or rebate. Until 31st March, 1934, the basis adopted for the value of exports of *butter* was the current market value, less the amount paid as export bonus. From 31st March, 1934 to 30th June, 1937, the basis was (*a*) sold in Australia for export—the f.o.b. equivalent of the price at which the butter was sold and (*b*) shipped on consignment—the f.o.b. equivalent of the ruling price overseas.

From 1st July, 1930 to 30th June, 1937, the basis adopted for the value of *wool* exported was (*a*) sold in Australia for export—the actual price paid plus the cost of services incurred in placing the wool on board ship, and (*b*) shipped on consignment—the f.o.b. equivalent of ruling Australian prices.

From 1st July, 1932 to 30th June, 1937, the basis adopted for the value of *wheat* exported was (*a*) sold in Australia for export—the f.o.b. equivalent of the price at which the wheat was sold, and (*b*) shipped on consignment—the f.o.b. equivalent of the current selling price overseas.

From 1st July, 1934 to 30th June, 1937, the basis adopted for the value of *flour* exported was (*a*) sold in Australia for export—the f.o.b. equivalent of the price at which the flour was sold, and (*b*) shipped on consignment—the f.o.b. equivalent of ruling Australian prices.

Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally :—

(1) Goods sold to oversea buyers before export—the f.o.b. equivalent of the price at which the goods were sold (e.g. as regards wool, the actual price paid by the oversea buyer plus the cost of all services incurred by him in placing the wool on board ship).

(2) Goods shipped on consignment—the Australian f.o.b. equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were despatched for sale (as regards wool, the f.o.b. equivalent of current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. equivalent of the price ultimately received).

All values to be shown in terms of Australian currency, and to include cost of containers.

3. **Customs Area.**—The Customs Area, to which all oversea trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales (including Australian Capital Territory), Victoria, Queensland, South Australia, Western Australia and Tasmania, and the Northern Territory. Non-contiguous territories and mandated areas are treated as outside countries, and trade

transactions between Australia and these non-contiguous territories are part of the oversea trade of Australia. Such transactions are shown separately, i.e., the trade of Australia with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—Statistics of oversea imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to a classification which came into operation on 1st July, 1945. The new classification provides for over 2,600 separate import items and 1,100 export items.

5. **The Trade Year.**—From 1st July, 1914, the statistics relating to Oversea Trade have been shown according to the financial year (July to June). Prior to that date the figures related to the calendar year. A table is given in § 18 showing the total value of imports and exports in the calendar years 1939 and 1944 to 1947 inclusive.

6. **Records of Past Years.**—In the years preceding Federation each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following tables for years prior to Federation have been carefully compiled and may be taken as representative of the oversea trade of Australia as a whole. On the introduction of the Customs Act 1901, the methods of recording values were made uniform throughout the States, but it was not until September, 1903 that a fundamental defect in the system of recording transhipped goods was remedied. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Oversea Trade During the 1939–45 War.**—Available records of imports and exports during the 1939–45 War are incomplete. Export entries were not made for a substantial volume of war material and supplies exported to Australian and Allied forces serving abroad, particularly in Papua, the Territory of New Guinea and other parts of the Pacific theatre of war. In addition, no export entries were passed for about £stg.23,000,000 of war material exported to other Governments. In general, however, the export of foodstuffs was recorded without serious deficiency. Imports as recorded do not include supplies imported for their own use by Allied forces serving in Australia—some part of which may subsequently have found its way into the hands of the Australian Government or people—also some imports of war material by the Commonwealth Government Departments and some items imported for civil consumption under United States of America Lend-Lease and Canadian Mutual Aid. There were substantial delays in recording imports of war material by the Commonwealth Government Departments and some items imported for civil consumption under United States of America Lend-Lease and Canadian Mutual Aid. These delayed entries have been recorded in the month in which the entry was passed and not in the month of arrival of the goods into this country.

It should be noted, moreover, that the recorded trade figures during the war period do not necessarily reflect the amount payable for imports or receivable for exports. Export to Australian forces and to allied forces under Reciprocal Lend-Lease and imports under Lend-Lease and Mutual Aid required no payment. On the other hand payment was received for wool and some minor items which were purchased by Great Britain under contract but not actually shipped, and for some unrecorded exports of war material. In addition, payment was made by Australia for some imports of war material in years prior to those in which import entries were recorded.

8. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1937–38 is given in § 12, page 419.

§ 7. Oversea Trade.

1. **Total Oversea Trade.**—(i) *Including Gold.* The following table shows the total trade (including gold) of Australia with oversea countries from the earliest date for which records are available. To save space, the period 1826 to 1939–40 has been divided into five-yearly periods, and the figures shown represent the annual averages for the periods specified. Figures for individual years were published in earlier issues of the Official Year Book but it should be borne in mind, however, that the figures therein for imports are in British currency. (*See* note to following table.)

In this issue the values in all tables in this chapter are shown in Australian currency. The value of imports represents the f.o.b. value at port of shipment plus the statutory 10 per centum imposed for value for duty purposes expressed in Australian currency.

TOTAL OVERSEA TRADE : AUSTRALIA.

(INCLUDING GOLD.)

Period.(*a*)	Value.			Value per Inhabitant.									Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.			Exports.			Total.			
	£'000.	£'000.	£'000.	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	%
1826 to 30	638	153	791	10	12	5	2	10	11	13	3	4	23.9
1831 „ 35	1,144	613	1,757	11	19	10	6	8	6	18	8	4	53.6
1836 „ 40	2,283	1,112	3,395	14	15	9	7	4	1	21	19	10	48.7
1841 „ 45	1,906	1,378	3,284	9	0	5	6	10	5	15	10	10	72.3
1846 „ 50	2,379	2,264	4,643	6	18	10	6	12	2	13	11	0	95.2
1851 „ 55	11,931	11,414	23,345	19	12	5	18	15	4	38	7	9	95.7
1856 „ 60	18,816	16,019	34,835	18	6	1	15	11	8	33	17	9	85.1
1861 „ 65	20,132	18,699	38,831	15	17	1	14	14	9	30	11	10	93.0
1866 „ 70	18,691	19,417	38,108	12	7	4	12	16	11	25	4	3	103.9
1871 „ 75	21,982	24,247	46,229	12	7	2	13	13	6	26	0	8	110.3
1876 „ 80	24,622	23,772	48,394	11	19	7	11	10	9	23	10	4	96.6
1881 „ 85	34,895	28,055	62,950	14	4	3	11	9	5	25	13	8	80.4
1886 „ 90	34,675	26,579	61,254	11	16	11	9	1	0	20	17	11	76.6
1891 „ 95	27,335	33,683	61,018	8	5	2	10	2	5	18	7	7	123.2
1896 „ 1900	33,763	41,094	74,857	9	5	4	11	5	6	20	10	10	121.7
1901 „ 05	39,258	51,237	90,495	10	1	10	13	2	9	23	4	7	130.5
1906 „ 10	51,508	(*b*)69,336	120,844	12	4	8	16	9	11	28	14	7	134.6
1911 „ 15-16	73,411	74,504	147,915	15	7	4	15	12	10	31	0	2	101.5
1916–17 to 1920–21	100,735	115,066	215,801	19	7	9	22	2	10	41	10	7	114.2
1921–22 to 1925–26	136,844	134,545	271,389	23	15	6	23	7	7	47	3	1	98.3
1926–27 to 1929–30	146,848	137,976	284,824	23	7	0	21	18	10	45	5	10	94.0
1930–31 to 1934–35	74,972	114,565	189,537	11	7	1	17	7	1	28	14	2	152.8
1935–36 to 1939–40	128,712	149,233	277,945	18	14	10	21	14	6	40	9	4	115.9
1940–41 ..	140,177	157,164	297,341	19	16	2	22	4	2	42	0	4	112.1
1941–42 ..	190,386	168,977	359,363	26	13	0	23	13	0	50	6	0	88.8
1942–43 ..	268,589	125,557	394,146	37	5	7	17	8	7	54	14	2	46.7
1943–44 ..	268,316	146,682	414,998	36	18	0	20	3	5	57	1	5	54.7
1944–45 ..	236,075	155,271	391,346	32	2	5	21	2	7	53	5	0	65.8
1945–46 ..	196,368	223,288	419,656	26	8	7	30	1	1	56	9	8	113.7
1946–47 ..	230,024	309,004	539,028	30	11	9	41	1	10	71	13	7	134.3

(*a*) The figures given for the years 1826 to 1939–40 represent the annual averages for the periods shown. The trade of the individual years will be found in Official Year Book No. 35 and earlier issues but it should be noted that imports are shown in British currency. From 1914–15 onwards the particulars relate to financial years. (*b*) Prior to 1906, ships' stores were included in the general exports. For value of such goods shipped on oversea vessels each year since 1937–38 see later table, § 12.

In issues of the Official Year Book prior to No. 23 fluctuations in the value of the overseas trade of Australia for earlier years have been treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914–18 War and these factors should be taken into consideration in making comparisons with earlier years.

In 1924–25 the total value of oversea trade exceeded £300 million for the first time. Of the total value of trade, amounting to £318,454,000, imports represented £157,143,000 and exports £161,311,000. Imports in 1924–25, however, included an exceptionally large quantity of bullion and specie valued at £10,543,000. In the three years ended 1928–29 imports fell but exports were well maintained and in 1929–30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for 1930–31 and some years thereafter. The lowest level was recorded in 1931–32 when the total trade amounted to £141,977,000. Following a gradual improvement in 1933–34 and 1934–35, recovery was more rapid in the three years ended 1937–38 owing generally to higher prices for exports of primary products and the rising flow of imports. In 1937–38, however, export prices fell sharply and declined still further in 1938–39. In 1939–40 the value of trade rose substantially as a result of increases in the value of both imports and exports, but declined again in 1940–41, mainly due to import restrictions and scarcity of shipping.

The outbreak of war in the Pacific in 1941 resulted in an enormous increase in the value of imports during 1941–42 and subsequent years. Fluctuating yearly increases in the value of exports were recorded during the same period. During 1946–47 the value of total trade reached the record total of £539,028,000 due largely to substantial increases in import and export prices. The total value of trade during 1945–46 amounted to £419,656,000 and the only other year in which a total trade in excess of £400 million was recorded was in 1943–44 (£414,998,000).

The value of exports in 1946–47 at £309,004,000 was also a record and the next highest value (£223,288,000) was recorded in 1945–46; in that year, however, gold amounting to £26,411,000 was exported whereas in 1946–47 gold exports were negligible.

Imports in 1946–47 amounted to £230,024,000 compared with the war-time record total of £268,589,000 in 1942–43.

(ii) *Excluding Gold.* The fluctuations in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which *all* gold movements have been excluded :—

OVERSEA TRADE : AUSTRALIA.

(EXCLUDING GOLD BULLION AND SPECIE.)

Year.	Imports excluding Gold.	Exports excluding Gold.	Total Trade excluding Gold.	Value per Inhabitant.			Percentage of Exports on Imports.
				Imports.	Exports.	Total Trade.	
	£'000.	£'000.	£'000.	£ s. d.	£ s. d.	£ s. d.	%
1938–39	124,478	122,544	247,022	17 19 0	17 13 6	35 12 6	98.4
1943–44	266,707	146,678	413,385	36 13 7	20 3 5	56 17 0	55.0
1944–45	234,657	155,271	389,928	31 18 7	21 2 7	53 1 2	66.2
1945–46	195,214	196,877	392,091	25 5 6	26 9 11	52 15 5	100.9
1946–47	228,924	309,003	537,927	30 8 10	41 1 10	71 10 8	135.0

2. **Balance of Trade.**—The table on page 399 shows the percentage of exports on imports (including gold) for five-yearly periods from 1826 to 1939–40 and for each year from 1940–41 to 1946–47, while the table above shows the percentage of exports on imports (excluding gold) for each year 1943–44 to 1946–47 compared with 1938–39. Reference to the first-mentioned table shows that prior to the five-yearly period 1891–95 the balance of trade, with two exceptions due to temporary dislocations, had been on the side of imports, while from that period to 1920–21 the position was reversed. During

the subsequent five-yearly period ended 1925–26, there was an excess of imports, as was the case in each of the years 1926–27 to 1929–30. From 1930–31 to 1938–39 exports greatly exceeded imports. In 1939–40 and 1940–41 exports exceeded imports but for the years 1941–42 to 1944–45 imports greatly exceeded exports. The position, however, was reversed during 1945–46 and 1946–47 when exports were greatly in excess of imports.

In recent years imports and exports of gold for monetary purposes have made the interpretation of the foregoing tables more difficult. In the following table the balance of commodity trade, including the value of gold currently produced in Australia, has been separated from the monetary movement of gold :—

COMMODITY BALANCE OF TRADE AND MONETARY MOVEMENT OF GOLD.

Year.	A. Total Imports other than Gold. (Specie, Bullion and in Matte.)	B. Total Exports, other than Gold. (Specie, Bullion and in Matte.)	C. Gold produced in Australia.	D. Total of Merchandise Exports and Gold Production. B+C	E. Commodity Balance of Trade. D−A	F. Net Exports of Gold (Specie, Bullion and in Matte) in excess of Production. F	G. Total Balance. E+F
	£'000,000	£'000,000	£'000,000	£'000,000	£'000,000	£'000,000	£'000,000
1910 ..	59.0	69.8	11.6	81.4	22.4	− 7.9	14.5
1911 ..	65.4	67.5	10.5	78.0	12.6	− 0.1	12.5
1912 ..	76.8	66.8	9.9	76.7	− 0.1	1.1	1.0
1913 ..	78.4	75.1	9.4	84.5	6.1	− 7.3	− 1.2
1914 (*a*) ..	39.0	36.5	4.4	40.9	1.9	− 3.7	− 1.8
1914–15 ..	64.0	58.0	8.5	66.5	2.5	− 6.3	− 3.8
1915–16 ..	77.2	64.2	7.7	71.9	− 5.3	2.3	− 3.0
1916–17 ..	76.0	86.3	6.6	92.9	16.9	4.8	21.7
1917–18 ..	60.8	75.0	5.8	80.8	20.0	− 0.9	19.1
1918–19 ..	95.0	106.8	5.4	112.2	17.2	− 5.6	11.6
1919–20 ..	98.9	144.3	5.4	149.7	50.8	0.1	50.9
1920–21 ..	163.8	126.8	4.7	131.5	−32.3	0.6	−31.7
1921–22 ..	103.0	124.3	3.8	128.1	25.1	− 0.3	24.8
1922–23 ..	131.7	115.6	3.3	118.9	−12.8	− 1.1	−13.9
1923–24 ..	140.6	116.7	3.2	119.9	−20.7	− 0.4	−21.1
1924–25 ..	146.7	160.4	2.8	163.2	16.5	−12.3	4.2
1925–26 ..	151.3	141.9	2.3	144.2	− 7.1	1.7	− 5.4
1926–27 ..	164.1	132.7	2.2	134.9	−29.2	8.6	−20.6
1927–28 ..	146.9	138.4	2.1	140.5	− 6.4	− 0.3	− 6.7
1928–29 ..	143.3	138.6	1.9	140.5	− 2.8	0.8	− 2.0
1929–30 ..	130.8	98.1	1.9	100.0	−30.8	24.7	− 6.1
1930–31 ..	68.4	90.6	2.5	93.1	24.7	11.5	36.2
1931–32 ..	56.1	97.1	4.5	101.6	45.5	6.6	52.1
1932–33 ..	71.2	98.7	5.8	104.5	33.3	15.3	48.6
1933–34 ..	74.5	114.2	7.1	121.3	46.8	1.2	48.0
1934–35 ..	90.7	103.4	7.4	110.8	20.1	0.6	20.7
1935–36 ..	104.7	124.1	9.2	133.3	28.6	1.6	30.2
1936–37 ..	113.5	148.2	11.3	159.5	46.0	0.4	46.4
1937–38 ..	140.0	141.3	12.8	154.1	14.1	0.8	14.9
1938–39 ..	124.5	122.5	14.6	137.1	12.6	0.3	12.9
1939–40 ..	144.9	149.4	17.6	167.0	22.1	− 1.6	20.5
1940–41 ..	136.2	134.9	16.4	151.3	15.1	1.8	16.9
1941–42 ..	187.1	158.9	14.7	173.6	−13.5	− 7.9	−21.4
1942–43 ..	268.3	125.5	9.7	135.2	−133.1	−11.3	−144.4
1943–44 ..	266.7	146.6	7.1	153.7	−113.0	− 8.7	−121.7
1944–45 ..	234.7	155.2	6.9	162.1	−72.6	− 8.3	−80.9
1945–46 ..	195.2	196.9	7.4	204.3	9.1	17.9	27.0
1946–47 ..	228.9	309.0	9.8	318.8	89.9	−10.8	79.1

(*a*) First six months only.

NOTE.—From 1939–40 onward under contracts with the British Government, Australia received payment for some exportable commodities (e.g., wool, etc.) irrespective of when the goods were shipped. Payments for exportable goods were somewhat larger than the recorded value of exports, and payments relating to the balance of trade were more favorable than is indicated by the figures above which relate only to goods actually shipped.

3. **Balance of Payments.**—The balance of visible trade, including the net movement of precious metals, does not present a complete picture of Australia's international transactions during each year. Allowance must also be made for unrecorded imports

and exports, for services rendered and received, and for international capital and interest transactions. The values of some of these items are known, and some of those remaining can be estimated with a sufficient measure of accuracy, but for many items it is difficult to make even a rough guess. A continuous investigation is being made into the values of these "invisible" items in the balance of payments.

§ 8. Direction of Oversea Trade.

1. **Imports according to Country of Origin.**—The following table shows the value of the imports into Australia during the years 1943–44 to 1946–47 compared with the year 1938–39 of commodities stated to be the produce or manufacture of the undermentioned countries.

AUSTRALIAN IMPORTS: COUNTRIES OF ORIGIN.

(Excluding Gold Bullion, Specie and in Matte.)

Country of Origin.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£'000.	£'000.	£'000.	£'000.	£'000.
British Countries—					
United Kingdom	50,626	70,980	77,269	73,681	81,937
Australian Territories—					
Nauru	814	..	..	..	259
New Guinea	208	111	750	227	438
Papua	262	301	480	292	208
Canada	9,674	11,546	11,249	8,695	18,312
Ceylon	1,052	4,786	4,942	6,333	7,218
India	3,595	25,991	20,222	12,571	19,166
Malaya (British)	1,131	1	1	7	3,449
New Zealand	2,217	1,288	1,990	2,819	3,940
Union of South Africa ..	306	895	716	954	1,523
Other British Countries ..	1,738	4,354	3,980	4,646	6,379
Total, British Countries ..	71,623	120,253	121,599	110,225	142,829
Foreign Countries—					
Belgium	1,230	..	..	70	1,754
China	579	50	5	105	1,261
France	1,288	1	2	28	1,839
Germany	5,174	3	4	14	157
Italy	858	16	..	5	3,051
Japan	5,126	..	..	3	765
Netherlands	878	1	..	15	524
Netherlands Indies ..	8,918	70	28	78	224
Norway	475	..	..	90	793
Philippine Islands	151	..	..	..	4
Sweden	1,186	4	4	562	1,685
Switzerland	1,176	283	272	932	1,190
United States of America ..	18,345	130,283	91,278	52,411	43,718
Other Foreign Countries ..	4,578	10,770	18,060	27,536	24,540
Total, Foreign Countries ..	49,962	141,481	109,653	81,849	81,505
Total (*a*)	121,585	261,734	231,252	192,074	224,334

(*a*) Excludes outside packages, £'000—1938–39, 2,893; 1943–44, 4,97[illegible]; 1944–45, 3,405; 1945–46, 3,140; 1946–47, 4,590.

2. **Percentage of Imports from Various Countries.**—In view of the fluctuations in the total values of imports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportions of imports supplied by the various countries may be obtained from the following table of percentages.

AUSTRALIAN IMPORTS : PERCENTAGES FROM COUNTRIES OF ORIGIN.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

Country of Origin.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
British Countries—					
United Kingdom	41.64	27.12	33.41	38.36	36.52
Australian Territories—					
Nauru	0.66	..	..	..	0.12
New Guinea	0.17	0.04	0.32	0.12	0.20
Papua	0.22	0.12	0.21	0.15	0.09
Canada	7.96	4.41	4.86	4.53	8.16
Ceylon	0.87	1.83	2.14	3.30	3.22
India	2.96	9.93	8.75	6.54	8.54
Malaya (British)	0.93	..	..	..	1.54
New Zealand	1.82	0.49	0.86	1.47	1.76
Union of South Africa ..	0.25	0.34	0.31	0.50	0.68
Other British Possessions ..	1.43	1.66	1.72	2.42	2.84
Total, British Countries ..	58.91	45.94	52.58	57.39	63.67
Foreign Countries—					
Belgium	1.01	..	..	0.04	0.78
China	0.48	0.02	..	0.06	0.56
France	1.06	..	..	0.01	0.82
Germany	4.25	..	..	..	0.07
Italy	0.71	0.01	..	..	1.36
Japan	4.22	..	..	..	0.34
Netherlands	0.72	..	..	0.01	0.23
Netherlands Indies	7.33	0.03	0.01	0.04	0.10
Norway	0.39	..	..	0.05	0.35
Philippine Islands	0.12	..	..	..	..
Sweden	0.97	..	..	0.29	0.75
Switzerland	0.97	0.11	0.12	0.49	0.54
United States of America ..	15.09	49.77	39.48	27.29	19.49
Other Foreign Countries ..	3.77	4.12	7.81	14.33	10.94
Total, Foreign Countries ..	41.09	54.06	47.42	42.61	36.33
Total	100	100	100	100	100

The table covers a period of the war and for that reason the figures are abnormal. They show a considerable increase in the proportion of imports from the United States of America—the average percentage for which in the five years ended 1938–39 was 15.74—and a decrease for the United Kingdom—the average percentage for which in the five years ended 1938–39 was 42.53.

3. **Direction of Exports.**—The following table shows the value of commodity exports to the principal countries during the years 1938–39 and 1943–44 to 1946–47.

EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

Country of Destination.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.
British Countries—					
United Kingdom	66,725	40,670	52,119	53,734	89,633
Canada	1,994	3,681	3,797	3.772	5,251
Ceylon	1,327	6,969	6,840	6,950	7,116
Fiji	623	1,007	1,127	1,325	1,573
Hong Kong	475	..	..	3,337	6,622
India	1,965	10,148	15,798	18,045	13,029
Malaya (British)	1,911	..	..	6,514	18,353
Mauritius	109	567	673	532	1,886
New Zealand	6,682	7,820	7,086	8,033	12,923
Papua	299	6,465	299	524	1,236
Union of South Africa ..	813	1,052	1,327	1,806	3,913
Other British Possessions ..	2,256	16,262	22,418	20,220	8,544
Total, British Countries ..	85,179	94,641	111,484	124,792	170,079
Foreign Countries—					
Belgium	5,547	..	..	7,461	19,084
Chile and Peru	3	223	955	2	18
China	3,023	..	..	885	6,067
Egypt	601	5,594	3,156	3,008	4,495
France	9,379	..	358	10,391	20,694
Germany	2,652	..	..	..	1,395
Italy	1,211	1,489	2,083	901	13,218
Japan	4,866	..	..	1,778	5,594
Netherlands	1,039	..	..	671	2,353
Netherlands Indies	1,373	29	67	1,808	486
Norway	25	..	..	113	517
Philippine Islands	499	..	2	116	454
Sweden	637	..	..	891	3,224
United States of America ..	3,614	30,934	30,766	37,340	47,599
U.S.S.R. (Russia)	278	142	42	541	626
Other Foreign Countries ..	2,618	3,626	4,358	6,179	13,100
Total, Foreign Countries ..	37,365	42,037	41,787	72,085	138,924
Unrecorded exports (estimated)	..	10,000	2,000	..	..
Total	122,544	146,678	155,271	196,877	309,003

4. **Percentage of Exports to Various Countries.**—In consequence of the fluctuations in the total values of exports, the relative importance during the war years of various countries as markets for Australian produce is shown more clearly by the following table of percentages.

There was a very marked increase in the proportion of exports to the United States of America and a decrease in the proportion to the United Kingdom, the respective percentages for which in the five years ended 1938–39 were 3.97 and 52.25.

EXPORTS FROM AUSTRALIA : PERCENTAGES TO VARIOUS COUNTRIES.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

Country of Destination.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
British Countries—					
United Kingdom	54.45	27.72	33.57	27.29	29.01
Canada	1.63	2.51	2.45	1.92	1.70
Ceylon	1.08	4.75	4.41	3.53	2.30
Fiji	0.51	0.68	0.73	0.67	0.51
Hong Kong	0.39	..	..	1.69	2.14
India	1.60	6.92	10.18	9.16	4.22
Malaya (British)	1.56	..	..	3.31	5.94
Mauritius	0.09	0.39	0.43	0.27	0.61
New Zealand	5.45	5.33	4.56	4.08	4.18
Papua	0.25	4.41	0.19	0.27	0.40
Union of South Africa ..	0.66	0.72	0.85	0.92	1.27
Other British Possessions ..	1.84	11.09	14.43	10.28	2.76
Total, British Countries ..	69.51	64.52	71.80	63.39	55.04
Foreign Countries—					
Belgium	4.53	..	..	3.79	6.18
Chile and Peru	..	0.15	0.62	..	..
China	2.46	..	..	0.45	1.96
Egypt	0.49	3.81	2.03	1.53	1.46
France	7.65	..	0.23	5.28	6.70
Germany	2.17	..	..	..	0.45
Italy	0.99	1.02	1.34	0.46	4.28
Japan	3.97	..	..	0.90	1.81
Netherlands	0.85	..	..	0.34	0.76
Netherlands Indies	1.12	0.02	0.04	0.92	0.16
Norway	0.02	..	..	0.06	0.17
Philippine Islands	0.41	..	..	0.06	0.15
Sweden	0.52	..	..	0.45	1.04
United States of America ..	2.95	21.09	19.82	18.97	15.40
U.S.S.R. (Russia)	0.23	0.10	0.03	0.27	0.20
Other Foreign Countries ..	2.13	2.47	2.80	3.13	4.24
Total, Foreign Countries ..	30.49	28.66	26.91	36.61	44.96
Unrecorded exports	..	6.82	1.29	..	..
Total	100	100	100	100	100

5. **Balance of Trade with Principal Countries.**—In the following table a comparison is made of the total Australian trade in merchandise (excluding bullion and specie) with principal countries during the years 1938–39 and 1946–47.

BALANCE OF AUSTRALIAN TRADE WITH PRINCIPAL COUNTRIES.

(EXCLUDING BULLION AND SPECIE.)

Country.	Imports from—(a)		Exports to—		Excess of Exports.	
	1938–39.	1946–47.	1938–39.	1946–47.	1938–39.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
United Kingdom ..	50,626	81,935	66,698	89,581	16,072	7,646
Canada	9,674	18,312	1,994	5,250	− 7,680	− 13,062
India	3,595	19,166	1,942	13,029	− 1,653	− 6,137
New Zealand	2,216	3,141	6,676	12,915	4,460	9,774
Other British Countries ..	5,424	19,453	6,878	49,202	1,454	29,749
Total, British Countries	71,535	142,007	84,188	169,977	12,653	27,970
Belgium	1,230	1,754	5,547	19,084	4,317	17,330
China	579	1,261	3,022	6,067	2,443	4,806
France	1,288	1,839	9,379	20,694	8,091	18,855
Germany	5,174	157	2,645	1,395	− 2,529	1,238
Italy	858	3,051	1,211	13,218	353	10,167
Japan	5,126	765	4,866	5,594	− 260	4,829
Netherlands Indies ..	8,918	224	1,373	486	− 7,545	262
United States of America ..	18,345	43,717	3,603	47,584	− 14,742	3,867
Other Foreign Countries ..	8,443	28,737	5,699	24,785	− 2,744	− 3,952
Total, Foreign Countries	49,961	81,505	37,345	138,907	− 12,616	57,402

(a) Excludes outside packages.

The balance of trade with single countries is of little significance, since in the first place there is still a fair proportion of Australian produce distributed through the United Kingdom either immediately, by transhipment or re-sale, or ultimately, by incorporation in manufactures. Further, in very many cases international balances are equated directly by services or indirectly by exchange of goods between several countries.

6. **Principal Imports and Exports, Countries.**—The total value of imports from and exports to each of the more important British and foreign countries during 1938–39, together with brief particulars of the principal commodities interchanged with such countries, will be found in the Official Year Book, No. 33, pp. 776–781.

§ 9. Classified Summary of Australian Oversea Trade with the United Kingdom.

1. **Imports.**—The following table shows, according to statistical classes, the value of imports into Australia of United Kingdom origin during the years 1943–44 to 1946–47 compared with the year 1938–39.

IMPORTS INTO AUSTRALIA OF UNITED KINGDOM ORIGIN : CLASSES.

Class.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	376,104	6,519	1,091	210,784	422,492
II. Vegetable foodstuffs ; non-alcoholic beverages, etc. ..	235,406	11,334	8,765	186,207	111,598
III. Alcoholic liquors, etc. ..	768,877	133,813	424,024	360.480	363,053
IV. Tobacco, etc.	24,087	10,388	10,616	18,780	371,106
V. Live animals	60,012	2,115	26,638	122,037	187,331
VI. Animal substances, etc. ..	45,423	20,381	14,627	41,955	180,140
VII. Vegetable substances, etc. ..	264,495	258,754	251,491	512,375	700.863
VIII. Apparel, textiles, etc. ..	12,566,861	16,866,453	23,120,060	23,400,926	27,156,715
IX. Oils, fats and waxes ..	168,883	29,188	25,619	88,857	188,546
X. Paints and varnishes ..	479,761	364,265	410,542	636,487	620,387
XI. Stones and minerals, etc. ..	348,906	238,367	186,793	77,175	93,902
XII. Metals, metal manufactures, and machinery	22,853,939	30,611,519	27,428,104	24,453,270	31,218,155
XIII. Rubber and leather, etc. ..	310,208	112,279	145,856	474,590	1,016,815
XIV. Wood and wicker, etc. ..	106,624	26,014	30,606	63,631	190,071
XV. Earthenware, etc.	1,185,141	828,375	1,239,772	1,993,008	3,072,515
XVI. Paper and stationery ..	3,689,414	2,371,582	2,689,552	2,985,113	4,962,598
XVII. Jewellery, etc.	344,815	171,083	150,770	478,141	2,007,489
XVIII. Optical, surgical, and scientific instruments	655,535	828,995	772,627	1,006,395	1,597,152
XIX. Drugs, chemicals, etc. ..	2,866,205	3,094,696	3,128,255	3,515,434	4,818,610
XX. Miscellaneous (*a*)	3,274,455	14,994,691	17,203,272	13,055,461	2,656,424
XXI. Gold and silver ; and bronze specie	17,920	210	..	269	1,925
Total	50,643,071	70,981,021	77,269,080	73,681,375	81,937,887

(*a*) Includes Arms, Ammunition and Explosives.

2. **Exports.**—In the following table the exports from Australia to the United Kingdom are shown in classes according to the same classification as for imports.

EXPORTS FROM AUSTRALIA TO THE UNITED KINGDOM : CLASSES.

Class.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	24,483,853	12,580,752	14,393,544	20,947,840	33,372,177
II. Vegetable foodstuffs ; non-alcoholic beverages, etc. ..	14,369,098	2,118,102	2,836,785	2,214,890	9,701,218
III. Alcoholic liquors, etc. ..	906,358	79,411	283,641	418,604	865,552
IV. Tobacco, etc.	1,196	996	..	..	256
V. Live animals	1,754	..	10	63	135
VI. Animal substances, etc. ..	19,475,233	19,006,024	23,673,527	22,620,378	28,415,652
VII. Vegetable substances, etc. ..	109,770	615,814	686,356	554,309	488,173
VIII. Apparel, textiles, etc. ..	40,909	109,708	145,101	916,932	1,264,248
IX. Oils, fats and waxes ..	179,408	278,534	316,619	163,117	121,961
X. Paints and varnishes ..	3,412	..	476	319	15,040
XI. Stones and minerals, etc. ..	846,994	747,507	918,690	1,032,461	993,044
XII. Metals, metal manufactures, and machinery	5,291,304	3,644,661	5,361,348	3,653,297	11,431,204
XIII. Rubber and leather, etc. ..	422,548	261,414	452,604	442,877	692,353
XIV. Wood and wicker, etc. ..	206,537	5,801	114,112	198,009	271,541
XV. Earthenware, etc.	3,679	20	407	2,016	3,328
XVI. Paper and stationery ..	32,464	10,236	7,843	23,119	94,917
XVII. Jewellery, etc.	31,626	324	19,169	28,306	10,945
XVIII. Optical, surgical, and scientific instruments	16,096	819	4,070	63,028	31,874
XIX. Drugs, chemicals, etc. ..	108,562	44,512	72,042	123,780	319,806
XX. Miscellaneous	166,862	1,165,324	2,832,515	329,138	1,487,982
XXI. Gold and silver ; and bronze specie	2,018,368	..	..	26,412,457	51,166
Total	68,716,031	40,669,959	52,118,859	80,144,940	89,632,572

3. **Imports of Principal Articles.**—The following table shows the value of the principal articles imported into Australia from the United Kingdom during the years 1943–44 to 1946–47 compared with the year 1938–39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED OF UNITED KINGDOM ORIGIN: AUSTRALIA.

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Whisky	692,032	121,888	423,634	357,987	343,969
Fibres	48,308	90,600	92,899	97,100	37,198
Hides and skins	26,570	10,907	1,275	4,458	70,127
Seeds	28,744	10,085	2,003	5,768	12,232
Socks and stockings	43,492	208	1,283	38	19,619
Gloves	53,295	184	9,102	122,102	285,950
Hats and caps	92,756	160	1,255	11,167	98,830
Trimmings and ornaments	127,340	220,945	308,229	738,489	1,413,674
Other apparel and attire	559,127	60,158	166,363	324,270	1,013,981
Carpets and carpeting	1,170,370	1,118	33,000	338,023	1,322,644
Floorcloths and linoleums	591,979	3,650	495	1,215	5,939
Piece Goods—					
Canvas and duck	524,030	1,388,617	1,046,811	946,723	636,363
Cotton and linen	4,585,536	4,098,422	7,258,667	7,443,869	6,932,027
Silk and artificial silk	1,063,764	5,970,130	7,900,735	7,336,932	7,689,128
Woollen or containing wool ..	276,682	369,615	299,980	363,688	587,964
All other piece goods	998,070	843,110	521,710	637,088	983,040
Sewing silks, cottons, etc.	588,119	899,714	965,693	729,546	743,415
Bags and sacks	6,577	28,660	12,421	4,543	11,442
Yarns—					
Artificial silk	254,680	1,473,208	1,584,851	1,789,223	1,511,528
Cotton	458,505	716,856	1,333,260	1,129,186	1,243,180
Woollen	58,923	7,064	27,767	22,302	18,459
Other	53,392	29,994	36,443	34,907	27,862
Electrical machinery and appliances ..	3,295,284	2,413,618	3,739,672	3,653,224	3,954,526
Electrical cable and wire, covered ..	1,394,790	668,320	653,562	494,872	351,737
Agricultural machinery	50,038	56,743	17,251	77,372	154,877
Metal-working machinery	945,516	650,585	268,587	464,625	1,139,369
Motive-power machinery	1,126,104	1,769,542	2,118,282	3,984,244	3,346,857
Iron and Steel—					
Pipes and tubes	520,225	162,602	121,762	142,508	74,654
Plate and sheet	2,664,289	278,085	317,740	699,167	2,105,630
Cutlery and platedware	570,277	473,584	513,793	762,838	1,589,151
Tools of trade	489,307	678,797	576,365	861,780	969,084
Motor cars, chassis, bodies, and parts ..	3,501,480	108,897	236,934	2,855,512	5,453,910
Rubber and rubber manufactures ..	220,073	70,280	113,039	407,875	888,877
Crockery	504,770	442,482	707,507	1,069,748	1,539,752
Glass and glassware	364,053	286,027	398,187	616,498	1,055,109
Paper, printing	1,032,299	50,075	73,205	128,529	352,649
Stationery and paper manufactures ..	1,770,098	1,638,598	1,908,095	1,943,540	3,016,741
Cinematograph films	71,317	53,169	86,309	43,169	67,872
Drugs, chemicals, and fertilizers ..	2,866,205	3,094,696	3,128,255	3,515,434	4,818,610
Arms and explosives	1,194,140	13,950,028	16,163,616	11,720,784	863,805
Musical instruments, pianos, etc ..	71,640	3,635	5,888	27,412	94,258
All other articles	15,688,875	27,785,956	24,093,155	17,774,220	25,091,248
Total Imports	50,643,071	70,981,021	77,269,080	73,681,375	81,937,887

4. **Exports of Principal Articles of Australian Produce.**—(i) *Quantities.* The following table shows the quantities of the principal articles of Australian produce exported to the United Kingdom during the years 1943–44 to 1946–47 compared with the year 1938–39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : QUANTITIES, AUSTRALIA.

Article.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Butter	centl.	2,170,515	934,453	825,048	1,232,784	1,166,400
Cheese	,,	347,991	83,945	63,210	206,629	410.437
Eggs in shell	doz.	10,069,570	..	..	6,631.477	16,385,676
Beef	centl.	2,477.128	7,511	120,116	407,271	1,524,622
Lamb	,,	1,557,485	1,362,945	1,040,786	369,090	1,110,651
Mutton	,,	253,074	202,577	170,156	70,687	453,870
Pork	,,	301,204	139,482	370,045	280,501	158,624
Meats, preserved in tins ..	,,	116,553	108,925	148,973	531,002	705,946
Milk and cream	,,	28,806	22,145	23,956	51,024	105,077
Fruits, dried	,,	1,173,664	1,097,420	1,019,637	432,558	555,055
,, fresh	,,	2,023,970	..	55,326	330,527	155,534
Barley	,,	1,027,052	..	..	..	218,009
Wheat	bus.	32,234,617	320,528	7	7	3
Flour	centl.	2,379,151	..	659,899	65,338	1,999,078
Sugar (cane)	ton	391.497	2	81	236	14,939
Wine	gal.	3,507,410	271,651	700,514	1,093,514	2,041,797
Wool (in terms of greasy wool)	centl.	4.125,467	2,496,046	3,154,665	2,869,540	3,220.372
Pearl-shell	cwt.	20,877	..	..	11	674
Tallow (unrefined).. ..	,,	167,695	145,565	160,771	61,112	118,917
Timber, undressed, including Logs (a)	sup. ft.	13,188,491	22,705	3,199,671	4,784,184	6,566,546
Soap	centl.	9,746	127	3.022	920	3,528

(a) Excludes undressed timber not measured in super. ft.

(ii) *Values.*—The values of the principal articles of Australian produce exported to the United Kingdom during the years 1943–44 to 1946–47 compared with the year 1938–39 are given in the table hereunder :—

PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : VALUES, AUSTRALIA.

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Butter	12,127,260	6,049,502	7,355,003	10,989,829	10,961,846
Cheese	1,019,681	312,213	232,588	959.282	1,694,561
Eggs in shell	631,976	..	..	572,156	1,301,317
Meats	10,581,318	6,093,291	6,450,514	7,000,755	15,652,037
Milk and cream	88,116	91,861	95.245	94,253	417,231
Fruits, dried	2,045,646	2,037,444	2,033,587	966,737	1,331,754
,, fresh	1,400,613	..	69,158	431,184	258,176
,, preserved in liquid	1,041,385	248	159,785	366,364	1,774.797
Barley	278,026	..	..	..	306,136
Wheat	4,443,613	66,400	2	2	2
Flour	705,518	..	353,685	75,251	3,387.817
Sugar (cane)	3,685,761	57	2,490	7,629	367,947
Wine	896,659	79,136	233,903	374,517	788,658
Hides and skins	813.201	528,124	685,845	1,074,666	1,989,282
Wool	18,513,175	18,475,758	22,982,119	21,524,047	26,376,781
Pearl-shell	90,777	..	..	180	20,911
Tallow (unrefined)..	137,464	219,919	252,592	118,917	12,646
Lead bullion	..	..	..	..	2,050,659
Lead, pig	4,198,486	2,162,187	4,303,491	1,949,419	6,478,830
Zinc bars, etc.	281,454	1,006,918	790,271	127,495	1,385,999
Leather	320,322	261,370	451,260	438,921	670,463
Timber, undressed, including logs (a)	152,394	1,035	90,280	144,875	203,242
Soap	21,489	636	5,914	2,276	5,916
Gold	1,990,948	..	..	26,411,224	..
Silver	21,794	..	..	1,233	36,945
All other articles	2,906,840	3,257,847	5,513,167	6,388,858	11,446,886
Total Exports (Australian Produce)	68,393,916	40,643,946	52,060,899	80,020,070	88,920,839

(a) Excludes undressed timber not measured in super. ft.

§ 10. Trade with Eastern Countries.

1. **Principal Articles Exported.**—The following table shows the value of exports of Australian and other produce from Australia to Eastern countries for the years 1938–39 and 1943–44 to 1946–47. The countries concerned in this trade were Borneo (British), Burma, Ceylon, China, Formosa, French Indo-China, Hong Kong, India, Japan, Korea, Kwantung Peninsula, Malaya (British), Manchuria, Netherlands East Indies, Philippine Islands, Siam (Thailand), Timor (Portuguese), and French and Portuguese Possessions in India. The outbreak of war with Japan in December, 1941 resulted in the cessation of trade with Eastern countries, except Ceylon and India. The export trade with Eastern countries rose substantially during 1934–35 and 1935–36 as a result of increased shipments of wool, flour, wheat and minerals. The exports in 1935–36 were valued at £25,532,518, the highest figure then recorded since 1928–29. In 1936–37 the value of exports to Eastern countries decreased by more than £8 million largely as the result of the heavy reduction in the purchases of wool by Japan ; wheat shipments to Japan and China also declined in value by nearly £2 million during the year. The value of exports decreased still further in 1937–38 and again a decline in the purchase of wool by Japan coupled with the recession in wool values was the principal contributing factor. Mainly owing to heavier shipments of wheat, the exports increased by more than £1 million in 1938–39. The outbreak of war in Europe with the further possibility of war with Japan resulted in substantial increases in the value of exports to Eastern countries during 1939–40 and 1940–41, particularly to Ceylon, Burma, India, Hong Kong, Malaya (British), China and Netherlands East Indies. The supply of foodstuffs, clothing, etc., to the garrison forces stationed in the countries mentioned above was largely responsible for the increase of approximately £6½ million in the value of exports during the year 1940–41 as compared with the year 1938–39. Following the termination of hostilities there were large shipments of merchandise of every description to Eastern Countries, resulting in an increase in the value of exports of approximately £20 million in each of the years 1945–46 and 1946–47 as compared with the previous year.

TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Biscuits	37,353	65,783	200,041	389,262	109,174
Butter	588,393	213,681	391,302	710,901	563,373
Cheese	43,555	571,013	1,119,051	466,432	473,786
Coal	125,740	..	5	1,050	274
Fruits—					
Fresh	166,076	246	8,235	126,019	846,894
Dried and preserved	42,981	139,340	128,091	355,462	319,435
Grain and pulse—					
Wheat	2,402,855	2,643,421	4,977,570	5,350,023	3,799,734
Flour	3,036,957	3,886,347	3,675,023	9,195,691	14,260,164
Other (prepared and unprepared) ..	70,288	339,632	388,582	634,689	2,605,123
Hay, chaff, and compressed fodder ..	16,156	137	1,177	9,876	52,657
Horses	85,895	..	100	33,528	136,105
Infants' and invalids' food	193,909	59,530	195,278	320,034	611,024
Iron ore	51,477	..	..	..	..
Iron and steel (scrap)	283,302	..	..	1,344	12,735
Jams and jellies	44,651	410,887	434,371	915,986	647,602
Lard and refined animal fats ..	26,248	5,675	12,599	37,771	361,938
Lead, pig	13,350	657,972	639,086	77,231	347,201
Leather	134,319	14,288	5,308	231,768	831,416
Meats—					
Bacon and hams	94,640	230,431	284,519	462,982	220,183
Other meats	274,015	1,983,653	3,133,218	3,198,591	2,403,707
Milk and cream	436,472	838,175	1,102,876	1,572,601	3,051,157
Pearl-shell and trochus-shell ..	42,425	..	..	..	9,741
Sandalwood	42,330	..	..	7,584	110,254
Skins, hoofs, horns, bones, and sinews	176,055	1,992	..	719	77,067
Tallow (unrefined)..	156,105	198,810	116,184	147,185	333,040
Timber (undressed)	62,893	18	150	14,848	151,340
Wool	4,180,914	1,865,461	1,547,956	1,886,436	3,579,751
Zinc—					
Bars, blocks, ingots, etc.	597,366	43,837	794,157	1,146,159	1,256,730
Concentrates	14,895	..	..	..	..
Other merchandise	1,393,170	2,974,946	3,552,809	13,001,503	23,012,967(a)
Total merchandise	14,834,785	17,145,275	22,707,688	40,295,675	60,184,572
Specie, and gold and silver bullion ..	933,965	4	40	414,989	755
Total Exports	15,768,750	17,145,279	22,707,728	40,710,664	60,185,327

(a) Includes yarns, textiles and apparel, £4,502,536 and metals and machinery, £5,872,565.

2. **Destination of Exports of Merchandise.**—The next table shows the destination of merchandise exported to Eastern countries during the year 1938–39 and the years 1943–44 to 1946–47.

EXPORTS OF MERCHANDISE FROM AUSTRALIA TO EASTERN COUNTRIES.

Country of Destination.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Borneo (British)	..	..	..	736,193	575,221
China	3,022,571	..	226	885,226	6,067,211
Hong Kong	475,263	..	..	3,337,201	6,621,887
India, Burma and Ceylon	2,423,663	17,116,759	22,638,454	25,293,471	21,385,910
Japan	4,865,469	..	..	1,778,076	5,594,079
Malaya (British)	1,911,007	..	..	6,513,742	18,352,714
Manchuria, including Kwantung Peninsula	63,450	..	..	..	30
Netherlands Indies	1,373,197	28,516	66,551	1,394,695	485,865
Philippine Islands	498,893	..	2,457	116,241	453,761
Siam (Thailand)	119,494	..	..	2,078	110,247
Other Eastern Countries	81,778	..	..	238,749	537,647
Total	14,834,785	17,145,275	22,707,688	40,295,675	60,184,572

3. **Imports of Merchandise from Eastern Countries.**—The values of imports into Australia from Eastern countries during the year 1938–39 and the years 1943–44 to 1946–47 are shown in the following table. The principal commodities imported in 1946–47, according to the countries of origin, were :—Ceylon—Tea, £5,389,566 ; India—Bags and Sacks, £6,322,432, Cotton and Linen piecegoods, £2,791,440, Hessians, £1,309,107 ; Japan—Raw Silk, £656,066, Rayon Yarns, £93,638 ; Netherlands Indies—Kerosene, £90,230, Fibres, £71,640, Petroleum Spirit, £34,365.

IMPORTS OF MERCHANDISE INTO AUSTRALIA FROM EASTERN COUNTRIES.

Country of Origin.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Borneo (British)	..	..	..	343,846	1,620,245
China	578,103	50,699	4,770	104,979	1,261,224
Hong Kong	44,548	319	45	12,912	132,692
India, Burma and Ceylon	4,679,701	30,716,548	25,166,554	18,904,466	26,400,504
Japan	5,126,722	81	5	2,857	765,573
Malaya (British)	1,130,280	1,229	636	7,729	3,449,618
Manchuria, including Kwantung Peninsula	18,646	..	..	..	38
Netherlands Indies	8,917,531	59,804	27,019	78,075	223,574
Philippine Islands	151,269	28	346	709	4,152
Siam (Thailand)	3,769	23	..	93	17,348
Other Eastern Countries	238,111	..	2	112	44,458
Total	20,888,680	30,828,731	25,199,377	19,455,778	33,919,426

The balance of trade with Eastern countries, which can be ascertained by comparison with the previous table, shows an excess of imports into Australia during the pre-war year 1938–39 and the war years 1943–44 and 1944–45, and an excess of exports during the years 1945–46 and 1946–47.

§ 11. Classified Summary of Australian Oversea Trade.

1. **Imports.**—The following table shows, according to statistical classes, the value of imports into Australia during each of the years 1943–44 to 1946–47 compared with the year 1938–39.

IMPORTS INTO AUSTRALIA : CLASSES.

Class.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	2,003,783	861,265	1,376,544	1,028,925	1,649,982
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	4,957,119	5,772,526	7,153,239	9,679,305	10,406,930
III. Alcoholic liquors, etc. ..	901,759	140,475	433,280	372,797	418,709
IV. Tobacco, etc.	2,334,519	5,340,159	3,879,540	5,865,148	4,600,982
V. Live animals	228,968	39,346	95,845	267,129	486,501
VI. Animal substances, etc. ..	2,432,711	641,933	841,006	1,136,766	3,779,147
VII. Vegetable substances, etc. ..	3,252,666	6,106,479	8,101,204	8,168,469	10,095,061
VIII. Apparel, textiles, etc. ..	22,239,513	42,402,464	49,828,228	34,839,217	53,748,778
IX. Oils, fats and waxes ..	10,893,933	26,091,171	22,696,536	22,814,821	22,701,013
X. Paints and varnishes ..	727,383	550,911	615,923	1,107,636	1,180,736
XI. Stones and minerals, etc. ..	1,128,382	1,794,020	1,518,574	1,713,758	2,660,549
XII. Metals, metal manufactures, and machinery	39,171,212	118,330,821	82,593,468	50,814,432	57,804,026
XIII. Rubber and leather, etc. ..	2,116,222	3,333,665	1,990,256	3,342,879	6,135,249
XIV. Wood and wicker, etc. ..	2,605,176	767,141	1,519,919	2,112,542	4,166,226
XV. Earthenware, etc.	2,335,892	976,320	1,432,949	2,321,382	4,004,260
XVI. Paper and stationery ..	7,747,434	5,648,461	7,165,846	8,979,418	14,733,298
XVII. Jewellery, etc.	1,793,085	645,272	544,375	1,580,686	3,353,370
XVIII. Optical, surgical, and scientific instruments ..	2,004,730	1,901,395	2,091,517	2,583,606	3,213,282
XIX. Drugs, chemicals, etc. ..	7,012,188	7,333,691	7,151,010	7,782,415	10,523,103
XX. Miscellaneous (*a*)	8,503,045	34,383,709	31,985,487	28,060,800	13,241,298
XXI. Gold and silver; and bronze specie	3,561,111	5,255,004	3,054,330	1,795,840	1,121,322
Total	127,950,831	268,316,228	236,075,076	196,367,971	230,023,822

(*a*) Includes Arms, Ammunition and Explosives.

2. **Exports.**—In the following table the exports from Australia are shown according to the same classification as for imports, distinguishing (A) Australian produce; (B) Other produce (re-exports); and (C) Total exports.

EXPORTS FROM AUSTRALIA : CLASSES.

Class.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
A. Australian Produce.					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	27,222,912	24,649,575	27,920,019	34,071,228	47,362,238
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	25,532,970	26,440,041	28,679,708	36,853,506	52,328,828
III. Alcoholic liquors, etc. ..	1,158,424	1,341,991	1,820,293	1,932,013	2,074,179
IV. Tobacco, etc.	237,948	840,176	761,255	644,526	216,762
V. Live animals	197,081	46,180	50,016	117,241	369,451
VI. Animal substances, etc. ..	47,192,519	52,603,154	56,194,696	81,200,025	141,898,366
VII. Vegetable substances, etc. ..	297,864	942,244	983,419	1,003,053	1,178,407
VIII. Apparel, textiles, etc. ..	446,032	2,804,815	1,663,471	6,381,619	10,158,320
IX. Oils, fats and waxes ..	611,633	1,580,774	1,347,008	943,011	928,557
X. Paints and varnishes ..	173,399	108,680	103,022	147,379	370,347
XI. Stones and minerals, etc. ..	2,667,077	2,468,312	2,538,073	1,948,096	3,420,675
XII. Metals, metal manufactures and machinery	9,510,802	7,133,273	11,281,077	14,256,633	27,864,190
XIII. Rubber and leather, etc. ..	745,190	934,854	1,006,184	1,528,645	3,032,764
XIV. Wood and wicker, etc. ..	1,066,288	347,404	475,596	896,186	1,221,617
XV. Earthenware, etc.	209,637	183,235	320,869	435,286	654,439
XVI. Paper and stationery ..	364,928	365,802	461,182	534,354	1,008,225
XVII. Jewellery, etc.	105,803	108,239	84,716	210,386	499,309
XVIII. Optical, surgical, and scientific instruments ..	150,709	158,983	254,515	422,247	582,553
XIX. Drugs, chemicals, etc. ..	717,667	1,136,741	1,521,539	2,948,902	4,484,779
XX. Miscellaneous (*a*)	915,711	8,324,000	12,128,839	5,812,845	4,695,673
XXI. Gold and silver; and bronze specie	15,951,167	3,366	9,611	26,533,603	78,995
Unrecorded Exports (Estimated) ..	..	10,000,000	2,000,000	..	..
Total	135,475,761	142,521,845	151,605,108	218,820,784	304,428,674

(*a*) Includes Arms, Ammunition and Explosives.

EXPORTS FROM AUSTRALIA : CLASSES—*continued.*

Class.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
B. Other Produce : Re-exports.					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	28,537	196,297	196,055	622,376	224,168
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	66,886	177,303	171,050	333,555	374,356
III. Alcoholic liquors, etc. ..	42,820	12,391	14,591	76,954	30,103
IV. Tobacco, etc.	112,997	22,745	58,407	93,820	8,073
V. Live animals	19,687	2,715	724	6,523	5,825
VI. Animal substances, etc. ..	136,279	22,552	12,492	27,073	84,061
VII. Vegetable substances, etc. ..	9,092	8,732	4,377	11,956	23,684
VIII. Apparel, textiles, etc. ..	222,819	123,435	657,184	748,009	493,399
IX. Oils, fats and waxes ..	101,711	2,861,018	2,051,608	1,473,116	671,038
X. Paints and varnishes ..	4,853	687	1,047	3,563	8,814
XI. Stones and minerals, etc. ..	2,443	3,644	8,359	820	26,930
XII. Metals, metal manufactures, and machinery	547,549	172,552	117,646	382,396	1,310,224
XIII. Rubber and leather, etc. ..	10,873	3,154	1,184	6,048	126,246
XIV. Wood and wicker, etc. ..	42,987	5,444	10,670	5,702	14,281
XV. Earthenware, etc.	9,428	9,269	3,806	7,929	27,123
XVI. Paper and stationery ..	128,388	9,411	12,316	49,245	115,890
XVII. Jewellery, etc.	74,188	5,531	5,004	33,850	33,465
XVIII. Optical, surgical, and scientific instruments ..	234,004	25,687	19,826	52,300	99,674
XIX. Drugs, chemicals, etc. ..	48,518	65,862	57,280	45,533	179,646
XX. Miscellaneous	164,647	424,976	262,755	155,886	677,371
XXI. Gold and silver; and bronze specie	3,011,845	6,400	..	330,172	40,695
Total	5,020,551	4,159,805	3,666,381	4,466,826	4,575,066
C. Total Exports : Australian Produce and Re-exports.					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	27,251,449	24,845,872	28,116,074	34,693.604	47,586,406
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	25,599,856	26,617,344	28,850,758	37,187.061	52,703,184
III. Alcoholic liquors, etc. ..	1,201,244	1,354.382	1,834,884	2,008,967	2,104,282
IV. Tobacco, etc.	350,945	862,921	819,662	738,346	224,835
V. Live animals	216,768	48,895	50,740	123,764	375,276
VI. Animal substances, etc. ..	47,328,798	52,625,706	56,207,168	81,227,098	141,982,427
VII. Vegetable substances, etc. ..	306,956	950,976	987,796	1,015,009	1,202,091
VIII. Apparel, textiles, etc. ..	668,851	2,928,250	2,320,655	7,129,628	10,651,719
IX. Oils, fats and waxes ..	713,344	4,441,792	3,398,616	2,416,127	1,599,595
X. Paints and varnishes ..	178,252	109,373	104,069	150,942	379,161
XI. Stones and minerals, etc. ..	2,669,520	2,471,956	2,546,432	1,948,916	3,447,605
XII. Metals, metal manufactures and machinery	10,058,351	7,305,825	11,398,723	14,639,029	29,174,414
XIII. Rubber and leather, etc. ..	756,063	938,008	1,007,368	1,534,693	3,159,010
XIV. Wood and wicker, etc. ..	1,109,275	352,848	486,266	901,888	1,235,898
XV. Earthenware, etc.	219,065	192,504	324,675	443,215	681,562
XVI. Paper and stationery ..	493,316	375,213	473,498	583,599	1,124,115
XVII. Jewellery, etc.	179,991	113,770	89,720	244,236	532,774
XVIII. Optical, surgical, and scientific instruments ..	384,713	184,670	274,341	474,547	682,227
XIX. Drugs, chemicals, etc. ..	766,185	1,202,603	1,578,819	2,994,435	4,664,425
XX. Miscellaneous (*a*)	1,080,358	8,748,976	12,391,594	5,968,731	5,373,044
XXI. Gold and silver; and bronze specie	18,963,012	9,766	9,611	26,863,775	119,690
Unrecorded Exports (Estimated) ..	..	10,000,000	2,000,000	..	..
Total	140,496,312	146,681,650	155,271,489	223,287,610	309,003,740

(*a*) Includes Arms, Ammunition and Explosives.

3. **Imports of Principal Articles.**—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during the years 1943–44 to 1946–47 compared with the year 1938–39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED : AUSTRALIA.

Article.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Fish, preserved in tins	lb.	28,902,983	13,024,425	12,439,213	5,880,566	8,379,009
	£	1,185,211	608,843	806,220	430,955	707,910
Tea	lb.	49,530,941	42.958.891	44,238.428	51,061,376	52,830,507
	£	3.109,811	4,117,605	4,623,862	5,694,068	7,029,213
Whisky	pf.gal.	523,346	65,459	219,190	206,092	174,972
	£	693,305	126,913	424,975	366,101	345.404
Tobacco and preparations thereof	£	2,334,518	5,340,159	3,879.540	5,865,148	4,600,982
Copra	cwt.	484,181	431,347	313,293	273,649	181,238
	£	219,283	522,788	338,905	328,587	253.605
Fibres	£	1,124,438	2,029,123	3,066,953	2,780,133	4,650,849
Hides and skins	£	871,330	463,417	500,700	961,458	1,882,328
Pulp for paper-making	ton	37,704	32,951	37,944	64,981	35.473
	£	402,735	817,018	983,284	1,069,192	1,044,848
Seeds	£	645,888	1,543,258	1,968,488	2,238,692	1,991,077
Socks and stockings	£	54,494	11,214	1,898	587	22,592
Gloves	£	461,502	184	25,136	128,889	325,973
Hats and caps	£	224,726	15,041	222,950	148,210	343,139
Trimmings and ornaments ..	£	483,459	409,549	365,888	731,862	1,823,262
Other apparel and attire ..	£	1,111,542	1,034,074	1,448,295	576,613	1,167,613
Carpets and carpeting ..	£	1,377,409	2,416	58,447	526,790	2,258,369
Floorcloths and linoleums ..	£	704,398	8,823	495	238,699	708,572
Piece Goods—						
Canvas and duck	£	713,409	3,747,218	1,584,299	1,225,077	1,049,572
Cotton and linen	£	6,044,603	15,017,842	21,228,488	10,249,613	13.584,646
Silk and artificial silk ..	£	3,286,708	6,061,675	8,147,932	7,811,692	14,561,095
Woollen or containing wool ..	£	353,533	385,935	471,972	365,900	621,434
All other piece goods ..	£	1,976,867	4,878,280	3,644,640	3,460,602	3,091,709
Sewing silks, cottons, etc. ..	£	629.743	900,674	966,140	731.245	751,397
Bags and sacks	£	1,890,797	3,808,483	6,677,133	2,394,900	6,356,384
Yarns—						
Artificial silk	£	669,246	1,473,279	1,590,138	1,836.911	1,816,667
Cotton	£	493,896	1,183.691	2,013.738	1,283,707	1,644.589
Woollen	£	60,639	7.143	29,990	22,372	7,773
Other	£	78,607	74,996	105,640	146,765	141,817
Oils, in bulk—						
Kerosene	gal.	54,714,472	63,998,268	90,976,098	91,347,591	84,112,406
	£	827,775	1,336,639	1,852,585	1,836,606	2,016,480
Lubricating (mineral)	gal.	15,519,442	49,061,640	20,359,430	19,989.587	26.375,543
	£	978.028	5,343.159	2,472,902	1,777,505	2,871.310
Petroleum, including crude	gal.	399,517,906	372,387,781	287,284,365	386,695,004	420,693,759
	£	7,087,309	12,449,998	9,309,373	10,171,941	11,203,330
Residual and solar ..	gal.	130,288,368	373,814,644	416.031.131	387,241,322	232,909,681
	£	1,105,070	5,983.821	7,981,120	8,059,275	4,933.988
Iron and steel—						
Pipes and tubes	£	565,058	241,818	148,068	161,765	105,587
Plate and sheet	£	3,274,389	5,298,090	5,603,440	3,867,135	5,376,252
Cutlery and platedware ..	£	656,920	616,130	605,192	835,891	1,642,088
Tools of trade	£	1,067,625	1,686,915	1,809,114	1,342,019	1,185,600
Motor cars, chassis, bodies, and parts	£	9,423,627	15,339,815	11,309,116	8,377,899	15,058,428
Electrical machinery and appliances	£	4,607,641	4,804.530	7,244,496	5,563,329	5,373,804
Electrical cable and wire, covered	cwt.	258,064	115,944	99,342	94,244	60,729
	£	1,546,102	1,270,991	829,449	763,538	662,658
Agricultural machinery ..	£	259,867	197,067	224,300	210,345	341,910
Metal-working machinery ..	£	1,656,946	5,516.758	1,306,585	825,955	1,950,005
Motive-power machinery ..	£	3,125,344	10,307,401	12,765,705	8,784,614	6,793,514
Rubber and rubber manufactures	£	1,935,571	3.271,522	1,944,890	3,266,209	5,975.338
Timber, undressed, including logs (*a*) ..	sup. ft.	348,098,462	44.738,329	85,989,258	103,411,634	121,925,952
	£	1,854,936	588,953	1,163,653	1,518,834	3,367,163
Crockery	£	700,368	445.994	714,097	1,087,368	1,592.594
Glass and glassware	£	1,002,589	278.917	445,370	613.572	1,618,083
Paper, printing	£	3,394,693	1,111,771	2,400,424	2,757,195	5,616,637
Stationery and paper manufactures	£	2,390,558	2,044,383	2,452,667	2,688,407	4,181,439
Cinematograph films ..	lin. ft.	73,859,662	48,613,360	65.724,616	69,795,498	81,666,820
	£	708,232	365,970	595,908	627.933	708,353
Drugs, chemicals, and fertilizers	£	7,012,188	7,178,734	6,901,606	7,782,415	10,523,103
Arms and explosives	£	1,352,835	22,675,678	25,699,147	22,687,466	5,012,896
Musical instruments, pianos, etc.	£	220,141	6,675	12,120	43,584	151,489
All other articles	£	39,934,319	105,363,958	65,107,543	49.102,403	58,978,954
Total Imports	£	127,950,831	268,316,228	236,075,076	196,367,971	230,023,822

(*a*) Excludes undressed timber not measured in super. ft.

4. **Exports of Principal Articles of Australian Produce.**—(i) *Quantities.* The following table shows the quantities of the principal articles of Australian produce exported during the years 1943–44 to 1946–47 compared with the year 1938–39. The articles are shown in the order in which they appear in the detailed classification

PRINCIPAL COMMODITIES EXPORTED : QUANTITIES, AUSTRALIA.

Article.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Butter	centl.	2,295,428	1,042,265	937,391	1,376,113	1,336,423
Cheese	,,	359,236	329,748	335,138	327,662	535,553
Eggs in shell	doz.	10,144,344	361,885	520,910	7,291,224	17,493,879
Beef	centl.	2,719,638	474,470	612,097	1,107,913	1,809,511
Lamb	,,	1,583.327	1,415,593	1,087,725	390,468	1,120,945
Mutton	,,	281,558	300,105	379,176	175.278	522,084
Pork	,,	307,164	160,172	398,818	307,729	187,053
Milk and cream	,,	191,039	392,487	468,711	641,886	1,038,742
Fruits—						
Dried	,,	1,681,270	1,717,046	1,752,577	911,710	957,033
Fresh	,,	2,752,381	135,081	179,297	813,179	673,485
Barley	,,	1,309,084	498,976	99,736	351,052	1,127,798
Wheat	bus.	63,129,023	33,658,458	32,391.450	12,484.156	12,175,543
Flour	centl.	14,501,304	11,810,882	11,194.989	10,377,511	15,301,958
Sugar (cane)	ton	443,014	95,826	114,011	150,972	117,004
Wine	gal.	3,719,401	1,245,299	1,550,948	1,784,436	2,720,547
Tobacco, manufactured ..	centl.	9,665	15,905	13,485	10,183	6,247
Wool (in terms of greasy wool)	,,	9,469,604	6,074,213	6,736,588	9,161,443	14,329,055
Pearl-shell	cwt.	52,532	51	401	959	5,535
Sandalwood	,,	32,962	..	..	2,856	22,426
Tallow (unrefined).. ..	,,	562,500	590,681	421,584	141,832	60,243
Coal	ton	382,085	157,741	189,198	75,883	44,375
Ores and concentrates ..	cwt.	5,916,685	5,881,512	4,982,482	4,634,106	4,789,965
Copper	,,	21,555	3,158	3,597	142,996	37,143
Lead, pig	,,	4,099,919	2,531,491	4,011,224	2,090,293	2,509,064
Zinc—bars, blocks, slabs, ingots	,,	892,630	1,044,731	1,203,580	963,804	916,277
Tin—ingots	,,	29,431	6,038	9,680	5,012	265
Timber, undressed, including logs (*a*)	sup. ft.	77,833,352	12,149,083	14,471,849	21,754,664	27,935,061
Soap	centl.	49,871	107,762	99,779	183,053	125,700

(*a*) Excludes undressed timber not measured in super. ft.

(ii) *Values.* The values of the principal articles of Australian produce exported during the years 1943–44 to 1946–47 compared with the year 1938–39 are given in the following table :—

PRINCIPAL COMMODITIES EXPORTED : VALUES, AUSTRALIA.

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Butter	12,891,837	6,870,852	8,249,506	12,271,662	12,569,922
Cheese	1,073,931	1,953,958	1,975,113	1,688,700	2,643,355
Eggs in shell	638,159	32,552	51,551	638,014	1,416,549
Meats	11,776,637	13,063,349	14,094,530	14,005,015	21,130,318
Milk and cream	791,011	1,447,698	1,780,297	2,367,444	4,341,963
Fruits—					
Dried	2,864,676	3,294,493	3,571,171	2,149,220	2,429,584
Fresh	2,022,874	315,329	318,351	1,264,681	1,549,890
Preserved in liquid	1,267,070	530,214	508,108	891,601	2,114,248
Barley	341,935	205,790	57,277	359.741	1,636,020
Wheat	8,734,974	8,264,235	9,752,156	6,223,325	6,338,389
Flour	4,540,210	6,699,299	6,731,717	11,336,621	22,534,957
Sugar (cane)	4,177,584	1,523,786	1,853,628	3,059.599	2,712,052
Wine	981,143	422,842	595,278	740,588	1,181,482
Tobacco, manufactured	225,025	512,839	474,438	373,222	220.086
Hides and skins	4,094,754	6,730,053	6,591,200	11,833.201	15,423,238
Wool	42,629,461	45,767,369	49,386,611	69,260,397	126,103,960
Pearl-shell	244.266	489	5,198	16,917	149.975
Sandalwood	42,330	..	..	7,584	110,267
Tallow (unrefined)..	483,034	903,978	669,490	303.489	317,002
Coal	347,054	182.354	223,677	92.764	54,754
Ores and concentrates	1,846.931	1,701,648	1,753,509	1.738,589	3,169.438
Copper	15,656	24.259	26,312	696,430	177,190
Lead, pig	4,266,566	3,158,313	5,556,418	4,075,098	8,598,565
Zinc—bars, blocks, slabs, ingots ..	887,421	1,203.490	1,879,193	2,102,504	2,713,001
Tin, ingots	370,137	113,796	181,430	96,231	5,201
Leather	626,198	499,715	559,970	925,649	1,961,284
Timber, undressed, including logs (*a*)	926,504	269,664	356,512	591,246	780,041
Soap	74,594	341,487	277,649	478.865	360,277
Gold	14,958,633	4	..	26,411,299	1,232
Silver	992,486	2,322	9,485	38,759	77,164
All other articles	10,342,670	26,485,668	32,115,333	42,722,329	61,607,270
Unrecorded Exports (Estimated) ..	..	10,000,000	2,000,000	..	..
Total Exports (Australian Produce)	135,475,761	142,521,845	151,605,108	218,820,784	304,428,674

(*a*) Excludes undressed timber not measured in super. ft.

5. **Imports of Merchandise, Specie and Bullion.**—The table hereunder gives the value of imports into Australia, during each of the years 1943–44 to 1946–47 compared with the year 1938–39, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of " free " and " dutiable " goods :—

IMPORTS OF MERCHANDISE, SPECIE, AND BULLION : AUSTRALIA.

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
	£	£	£	£	£
1938–39 ..	50,933,154	73,456,566	124,389,720	3,561,111	127,950,831
1943–44 ..	216,546,932	46,514,292	263,061,224	5,255,004	268,316,228
1944–45 ..	187,633,786	45,386,960	233,020,746	3,054,330	236,075,076
1945–46 ..	130,266,583	64,305,548	194,572,131	1,795,840	196,367,971
1946–47 ..	107,981,117	120,921,383	228,902,500	1,121,322	230,023,822

6. **Exports of Merchandise, Specie and Bullion.**—The next table shows the recorded value of exports from Australia during the years 1943–44 to 1946–47 compared with the year 1938–39, grouped under the headings—Merchandise, and Specie and Bullion, giving the exports of Australian Produce and Other Produce separately :—

EXPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

Year.	Merchandise.			Specie and Bullion.			Total.
	Australian Produce.	Other Produce.	Total.	Australian Produce.	Other Produce.	Total.	
	£	£	£	£	£	£	£
1938–39 ..	119,524,594	2,008,706	121,533,300	15,951,167	3,011,845	18,963,012	140,496,312
1943–44 ..	142,518,479	4,153,405	146,671,884	3,366	6,400	9,766	146,681,650
1944–45 ..	151,595,497	3,666,381	155,261,878	9,611	..	9,611	155,271,489
1945–46 ..	192,287,181	4,136,654	196,423,835	26,533,603	330,172	26,863,775	223,287,610
1946–47 ..	304,349,679	4,534,371	308,884,050	78,995	40,695	119,690	309,003,740

7. **Imports in Tariff Divisions.**—In the following table the imports into Australia during the years 1943–44 to 1946–47 compared with the year 1938–39 have been classified in accordance with the sixteen divisions of the Customs Tariff.

IMPORTS IN TARIFF DIVISIONS: AUSTRALIA.

Tariff Division.	Imports.				
	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
I. Ale, Spirits, and Beverages	1,144,793	744,794	1,235,762	562,896	594,355
II. Tobacco and preparations thereof ..	2,334,518	5,340,159	3,879,540	5,630,422	4,520,472
III. Sugar	50,143	25,577	19,044	21,086	207,984
IV. Agricultural Products and Groceries ..	7,930,289	7,938,726	10,144,182	11,184,760	13,738,560
V. Textiles, Felts and Furs, and Manufactures thereof, and Attire	19,941,329	37,883,249	45,061,850	25,636,764	46,615,310
VI. Metals and Machinery	27,765,764	56,180,822	55,249,673	14,757,300	26,627,767
VII. Oils, Paints, and Varnishes	11,973,697	27,355,807	23,633,614	17,321,870	22,069,672
VIII. Earthenware, Cement, China, Glass, and Stone	2,891,466	1,623,908	1,908,973	2,394,198	4,337,092
IX. Drugs and Chemicals	5,054,308	5,234,809	5,109,610	4,854,239	7,511,448
X. Wood, Wicker, and Cane	2,648,686	767,139	1,526,089	1,459,866	3,715,894
XI. Jewellery and Fancy Goods	2,562,549	1,481,903	1,612,559	2,040,267	4,163,146
XII. Hides, Leather, and Rubber ..	2,348,657	3,582,326	2,297,071	3,013,626	6,065,855
XIII. Paper and Stationery	8,107,752	6,640,357	8,306,735	6,229,380	12,956,166
XIV. Vehicles	11,602,286	75,727,470	45,347,038	3,310,359	16,892.822
XV. Musical Instruments	357,762	6,675	12,120	39,290	160,950
XVI. Miscellaneous ..	13,026,023	28,532,817	23,726,582	92,175,518 (*a*)	50,487,398 (*a*)
— Free Goods not specially mentioned in Tariff	4,649,698	3,994,686	3,950,304	3,940,290	8,237,609
Total Merchandise ..	124,389,720	263,061,224	233,020,746	194,572,131	228,902,500
Specie and Bullion ..	3,561,111	5,255,004	3,054,330	1,795,840	1,121,322
Grand Total ..	127,950,831	268,316,228	236,075,076	196,367,971	230,023,822

(*a*) Includes Goods Free for Commonwealth Government, which in previous years are distributed according to Tariff Divisions.

8. **Imports and Net Customs Revenue.**—The percentage of net Customs revenue collected on the total value of all merchandise imported in each year was as follows :—1938–39, 21.9 per cent. ; 1943–44, 6.6 per cent. ; 1944–45, 8.0 per cent. ; 1945–46, 12.7 per cent. ; and 1946–47, 17.1 per cent. Primage duty was in force during these years and adding this to net Customs revenue, the percentages were as follows :—1938–39, 25.0 per cent. ; 1943–44, 7.5 per cent. ; 1944–45, 8.9 per cent. ; 1945–46, 14.3 per cent. ; and 1946–47, 19.8 per cent. The percentages of net Customs revenue, omitting primage, on the total value of dutiable goods only were—1938–39, 37.1 per cent. ; 1943–44, 37.6 per cent. ; 1944–45, 41.1 per cent. ; 1945–46, 38.4 per cent. ; and 1946–47, 32.3 per cent. The calculations are based on uniform currency values and on the assumption that the value of clearances approximated to the value of imports during the same period.

9. **Protective and Revenue Customs Duties.**—In the following table the value of goods cleared for home consumption classified under protective and revenue duties and the gross duty collected are shown for the United Kingdom and other countries for each of the years 1937–38 to 1939–40. Information for a later year is not yet available :—

IMPORTS (CLEARANCES) CLASSIFIED UNDER PROTECTIVE AND REVENUE DUTIES : AUSTRALIA.

Item.	1937–38.			1938–39.			1939–40.		
	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Dutiable Goods :—									
Protective.. ..	11,940	9,758	21,698	10,981	9,479	20,460	10,866	8,929	19,795
Revenue	16,141	43,917	60,058	13,623	38,036	51,659	16,674	43,146	59,820
Total Dutiable Goods..	28,081	53,675	81,756	24,604	47,515	72,119	27,540	52,075	79,615
Free Goods	28,151 (*a*)	26,842 (*a*)	58,183	22,607 (*a*)	26,119 (*a*)	54,536	24,355 (*a*)	33,447 (*a*)	68,155
Total All Goods ..	56,232 (*a*)	80,517 (*a*)	139,939	47,211 (*a*)	73,634 (*a*)	126,655	51,895 (*a*)	85,522 (*a*)	147,770

PERCENTAGE OF TOTAL GOODS CLEARED FOR HOME CONSUMPTION.

Item.	1937–38.			1938–39.			1939–40.		
	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.
	%	%	%	%	%	%	%	%	%
Dutiable Goods :—									
Protective.. ..	8.6	6.9	15.5	8.6	7.5	16.1	7.4	6.0	13.4
Revenue	11.5	31.4	42.9	10.8	30.0	40.8	11.3	29.2	40.5
Total Dutiable Goods..	20.1	38.3	58.4	19.4	37.5	56.9	18.7	35.2	53.9
Free Goods	20.1	19.2	41.6	17.9	20.6	43.1	16.5	22.6	46.1
Total All Goods ..	40.2	57.5	100.0	37.3	58.1	100.0	35.2	57.8	100.0

GROSS CUSTOMS DUTY COLLECTED.(*b*)

Item.	1937–38.			1938–39.			1939–40.		
	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.
	£'000.	£.'000.	£.'000.	£.'000.	£.'000.	£.'000.	£.'000.	£.'000.	£.'000.
Dutiable Goods :—									
Protective.. ..	2,335	4,040	6,375	2,139	3,991	6,130	1,999	3,585	5,584
Revenue	1,984	21,199	23,183	1,783	20,449	22,232	2,228	23,238	25,466
Total Dutiable Goods..	4,319	25,239	29,558	3,922	24,440	28,362	4,227	26,823	31,050

AVERAGE AD VALOREM RATE OF DUTY ON GOODS CLEARED FOR HOME CONSUMPTION.

Item.	1937–38.			1938–39.			1939–40.		
	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.	United Kingdom.	Other Countries.	Total.
	%	%	%	%	%	%	%	%	%
Dutiable Goods :—									
Protective.. ..	19.6	41.4	29.4	19.5	42.1	30.0	18.4	40.2	28.2
Revenue .. .	12.3	48.3	38.6	13.1	53.8	43.0	13.4	53.9	42.6
Total Dutiable Goods.	15.4	47.0	36.2	15.9	51.4	39.3	15.3	51.5	39.0

(*a*) Excludes goods admitted free for Commonwealth, Consuls, etc., and free reimported not distributed according to United Kingdom and other origin. (*b*) Excludes primage duty.

§ 12. Ships' Stores.

Prior to 1906, goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1937–38 to 1946–47, showing fuel oils separately, is given in the following table :—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS : AUSTRALIA.

Period.	Fuel Oils.	All Stores (including Fuel Oils).	Period.	Fuel Oils.	All Stores (including Fuel Oils).
	£	£		£	£
1937–38	610,080	2,091,249	1942–43 ..	3,833,414	6,016,334
1938–39	606,515	2,105,619	1943–44 ..	6,078,800	8,478,714
1939–40	921,144	2,539,848	1944–45 ..	8,229,307	11,373,252
1940–41	1,674,133	3,528,555	1945–46 ..	2,849,156	6,331,657
1941–42	3,395,337	5,791,983	1946–47 ..	1,684,502	4,506,599

In addition to fuel oils, the principal items of ships' stores supplied to oversea vessels in 1946–47 were—Bunker coal, £655,207 ; meats, £536,331 ; tobacco and cigarettes, £105,609 ; vegetables £120,961 ; ale, beer and porter, £96,128 ; butter, £61,585 ; fish, £80,038 and oils other than fuel, £132,735.

The net Customs duty collected on ships' stores carried to Australia on overseas vessels and consumed in Australian waters amounted in 1946–47 to £22,748.

§ 13. Movement of Specie and Bullion.

1. **Imports and Exports.**—The following tables show the values of gold and silver specie and bullion, and of bronze specie imported into and exported from Australia during the years 1938–39 and 1942–43 to 1946–47.

IMPORTS AND EXPORTS, SPECIE AND BULLION : AUSTRALIA.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
IMPORTS.						
	£	£	£	£	£	£
Gold—Specie ..	18,333	..	..	..	271	7
Bullion ..	3,453,754	1,612,373	1,608,608	1,417,743	1,152,840	1,085,301
In Matte ..	..	..	..	..	..	14,207
Total ..	3,472,087	1,612,373	1,608,608	1,417,743	1,153,111	1,099,515
Silver—Specie ..	63,549	1,241,004	3,446,938	1,636,114	190,603	12,400
Bullion ..	25,229	2,879	1,056	473	2,249	9,193
In Matte	..	..	..	..	..	214
Total ..	88,778	1,244,783	3,447,994	1,636,587	192,852	21,807
Bronze—Specie ..	246	68,105	198,402	..	449,877	..
Total ..	3,561,111	2,925,261	5,255,004	3,054,330	1,795,840	1,121,322

IMPORTS AND EXPORTS, SPECIE AND BULLION: AUSTRALIA—*continued.*

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
			EXPORTS.			
	£	£	£	£	£	£
Gold—Specie ..	110,204	..	4	..	..	..
Bullion ..	17,843,088	..	..	..	26,411,299	1,232
In Matte ..	..	..	..	..	..	..
Total ..	17,953,292	..	4	..	26,411,299	1,232
Silver—Specie ..	42,726	3,513	8,722	9,485	346,799	81,132
Bullion ..	966,716	1,277	..	..	22,132	36,147
In Matte	..	..	..	..	..	580
Total ..	1,009,442	4,790	8,722	9,485	368,931	117,859
Bronze—Specie ..	278	13	1,040	126	83,545	599
Total—						
Australian Produce ..	15,951,167	3,300	3,366	9,611	26,533,603	78,995
Other Produce ..	3,011,845	1,503	6,400	..	330,172	40,695
Grand Total ..	18,963,012	4,803	9,766	9,611	26,863,775	119,690

2. **Imports and Exports by Countries.**—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1946–47 :—

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES: AUSTRALIA, 1946-47.

Country.	Specie.	Bullion.	In Matte.	Total.
		IMPORTS.		
	£	£	£	£
Australia(*a*)	8,860	413	..	9,273
United Kingdom	..	1,925	..	1,925
Australian Territories—				
New Guinea	296	146,115	..	146,411
New Zealand	..	934,418	14,421	948,839
Pacific Islands—				
Fiji	..	11,484	..	11,484
New Hebrides	1,939	..	..	1,939
Solomon Islands	..	128	..	128
Union of South Africa	26	..	..	26
Total British Countries ..	11,121	1,094,483	14,421	1,120,025
Germany	8	..	..	8
Netherlands Indies	14	..	..	14
United States of America	1,264	11	..	1,275
Total Foreign Countries ..	1,286	11	..	1,297
Grand Total	12,407	1,094,494	14,421	1,121,322

(*a*) Australian produce reimported.

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES : AUSTRALIA, 1946–47—*continued.*

Country.	Specie.	Bullion.	In Matte.	Total.
		EXPORTS.		
	£	£	£	£
United Kingdom	16,011	35,155	..	51,166
Australian Territories—				
Papua	12,590	..	..	12,590
Canada	810	..	..	810
Ceylon	176	..	..	176
India	329	..	..	329
New Zealand	5,620	1,636	100	7,356
Pacific Islands—				
Fiji	..	135	480	615
Gilbert and Ellice Islands.. ..	795	..	..	795
New Hebrides	24,822	..	..	24,822
Tonga	40	..	..	40
Palestine	560	453	..	1,013
Union of South Africa	2,375	..	..	2,375
Total British Countries ..	64,128	37,379	580	102,087
Egypt	332	..	..	332
New Caledonia	2,000	..	..	2,000
Philippine Islands	250	..	..	250
United States of America	15,021	..	..	15,021
Total Foreign Countries ..	17,603	..	..	17,603
Grand Total	81,731	37,379	580	119,690

§ 14. Exports according to Industries.

1. **Classification.**—The following table gives an analysis of the exports of Australian produce according to the main classes of industry in which the goods were produced for the years 1945–46 and 1946–47 in comparison with those for the years 1913 and 1938–39. The index-number based on the year 1913 shows the variations in the total recorded value only of exports in each industrial group, and has not been adjusted either for price-changes or in accordance with the variation of the Australian £ in relation to sterling.

A graph is published on page 388 of this chapter which shows the value of exports of Australian produce according to industrial groups from 1920–21 onward.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN.
VALUE OF EXPORTS.

Industrial Group.	1913.(*a*)		1938–39.		1945–46.		1946–47.	
	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.
Agriculture ..	10,678	100	26,361	247	35,479	332	50,606	474
Pastoral ..	42,057	100	59,115	141	94,920	226	161,797	385
Dairy and Farm-yard	3,855	100	15,640	406	20,520	532	26,771	694
Mines and Quarries *b*	21,926	100	23,984	109	16,718	76	25,947	118
Fisheries ..	425	100	288	68	184	43	397	93
Forestry ..	1,106	100	1,056	95	650	59	1,063	96
Total, Primary Produce ..	80,047	100	126,444	158	168,471	210	266,581	333
Manufacturing ..	2,305	100	8,650	375	31,342	1360	47,645	2067
Total ..	82,352	100	135,094	164	199,813	243	314,226	382

(*a*) Base year. (*b*) Australian production of gold substituted for exports of gold each year.

2. **Relative Importance of Industrial Groups.**—In the previous table the value of commodities in each industrial group of exports of Australian produce is that recorded at date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the Mines and Quarries group for actual shipments of gold in each year. This has been done to eliminate the exports of gold for monetary purposes. In order of importance the pastoral group occupied the highest place, representing in 1913 51.1 per cent. of the total exports, as compared with 43.7 per cent. in 1938–39, 47.5 per cent. in 1945–46, and 51.8 per cent. in 1946–47.

Exports of agricultural produce rank next in importance. From 13.0 per cent. of the total exports in 1913, agricultural produce increased to 19.5 per cent. in 1938–39, but declined to 17.8 per cent. in 1945–46 and to 16.2 per cent. in 1946–47.

According to value, exports of dairy and farmyard produce increased from 4.7 per cent. in 1913 to 11.6 per cent. in 1938–39 but declined to 10.3 per cent. in 1945–46 and to 7.8 per cent. in 1946–47. Though the products of mines and quarries declined seriously subsequently to the year 1913, a recovery was made in later years, the figures for 1938–39 representing 17.7 per cent. but in 1945–46 and 1946–47 the percentages were only 8.4 and 8.3 respectively. The manufacturing groups of exports which represented 2.8 per cent. in 1913, had increased to 6.4 per cent. in 1938–39 and to 15.3 per cent. in 1946–47.

3. **Australian Production and Exports according to Industry.**—The following table shows the total values of Australian production and Australian exports during the period of ten years 1936–37 to 1945–46, classified according to industries; the proportion of each industrial group to total production and to total exports; and in the last column the percentage exported of the production of each industrial group :—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO INDUSTRY : 1936–37 TO 1945–46.

Industrial Group.	Value of Production during Ten Years.	Percentage on Total Production.	Value of Exports during Ten Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
	£'000.	%	£'000.	%	%
Agriculture	996,541	16.50	278,629	17.72	27.96
Pastoral	1,137,364	18.83	714,550	45.45	62.83
Dairy and Farmyard ..	671,411	11.12	148,107	9.42	22.06
Mining	348,534	5.77	204,134	12.99	58.57
Forestry and Fisheries ..	176,868	2.93	10,490	0.67	5.93
Total, Primary Produce ..	3,330,718	55.15	1,355,910	86.25	40.71
Manufacturing	2,708,183	44.85	216,113	13.75	(a) 7.98
Total	6,038,901	100.00	1,572,023	100.00	26.03

(a) See letterpress in the concluding paragraph of this section.

The figures relating to value of production and value of exports are subject to the qualifications mentioned previously. A period of ten years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups.

The total exports of gold bullion and specie are not included in the value of exports of the mining industry, the actual production of gold during the period being taken.

On account of the inherent difficulties of classifying production and exports by industries, the figures given for the manufacturing industry should not be interpreted too literally. In the first place, the value of manufacturing "production" stated is not the total value of output, but only the "value added" by manufacturing processes, while the value of manufactured exports represents the total value of the goods, including raw materials, etc. Secondly, some of the exported goods classified as primary produce have been increased in value by manufacturing processes, but have not been changed in form sufficiently to warrant their inclusion as manufactured products, e.g., flour, butter and sugar.

§ 15. Australian Index of Export Prices.

1. **The Old Annual Series.**—With the exception of a few years after 1929–30 an annual index of export prices has been published by this Bureau since its inception. An index was at first obtained by valuing the exports (other than gold) of each successive year at the prices of 1901, and dividing the values so obtained into the export values actually recorded. These computations were carried back to 1901. In 1918 the procedure was changed and brought into harmony with the methods adopted by the Bureau for constructing other price indexes. The average quantities of the principal exports (other than gold) for the nineteen and a half years from 1st January, 1897 to 30th June, 1916 were taken, and valued at the prices of each successive year. Comparisons of the resulting totals for different years were assumed to give the required comparisons of export price-levels for those years. The two methods would, however, give the same results only if the proportion of different exports for each year in question was the same as the average for the nineteen and a half years. The proportion was, in fact, varying appreciably from year to year with the seasons. The old index, therefore, was based on a different system of weighting in each year, so that the results were not comparable for different years. The new method gave comparable and satisfactory results so long as the proportion of different exports was not widely different from the average of 1897 to 1916. After the 1914–18 War, however, the relative importance of different exports changed considerably. By about 1930 it began to appear that the change was great enough to throw some doubt on the accuracy of the index. It was published with increasing reluctance until 1929–30, after which it was withdrawn from publication.

Following that year endeavours were made to design and compile new series of index-numbers which would reflect more accurately the short- and intermediate-period fluctuations in export prices.

2. **The New Monthly Series.**—An attempt was made to overcome some of the difficulties occasioned by variations in the proportions of the different exports by compiling two separate series of monthly index-numbers. The first series was compiled in very much the same way as the old annual index-numbers, although certain important changes have been made in the data utilized. These are described below. For the present it may be noted that the purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports. It is thus an index purely of price changes. The second series was designed for shorter-period comparisons—from one or more months of the current year to the corresponding months of the previous year. The latter is compiled in such a way as to take closer account

of the actual quantities of each article exported at current prices ; and hence to indicate with rather greater accuracy the extent to which price-movements have affected the actual value of our current exports. It will be clear, therefore, that the two series are designed to measure different things, any differences between the results being explicable on wider grounds than mere differences in formulae.

Reference has already been made to the fact that the data on which the new series are based differ from those utilized in the old series of annual index-numbers. These changes apply to both of the new series.

The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the " unit-values " declared at the Customs. Declared unit values are not satisfactory even in an annual index-number, partly because the returns are not always sufficiently accurate, and partly because there is a constant variation in the proportions of different grades and qualities included in the actual exports of any given period. An obvious example of the latter type of inaccuracy is furnished by the case of wool, the poorer grades of which are shipped during certain months of the off-season. In a monthly series of index-numbers, declared unit-values are even less satisfactory, as the difficulties are greatly magnified over short periods, during which the inaccuracies have little chance of averaging out.

Moreover, the export parities have in all cases been based on prices f.o.b. Australian ports. Where freight and selling charges form an appreciable percentage of the selling price, the use of unadjusted oversea quotations results in some distortion of the amplitude of the percentage fluctuations in prices.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

Each series of index-numbers takes account of 20 items, which constitute about 85 per cent. of the total value of exports of merchandise and silver, and gold production.

3. **Monthly Index (Fixed Weights).**—The original " quantity multipliers " used for the first series of index-numbers were, in round figures, the average annual exports (or production, in the case of gold) during the five years 1928–29 to 1932–33. This period was chosen some time ago as being fairly representative of the mutual relationship of the different export commodities over the period from 1928 to 1933 and, so far as it was possible to judge at the time, over the ensuing few years. As from July, 1936, the " multipliers " were revised to bring them into accord with observed changes in the composition of Australian exports, and are now based on the average annual exports (production in the case of gold) during the three years 1933–34 to 1935–36. The break of continuity has been bridged by the usual method of splicing.

The twenty items, together with the units of quantity and the " quantity multipliers ", are given in the following table. It should be noted that (i) the " multiplier " allotted to wheat has been increased to take into account the " wheat equivalent " of flour exported ; (ii) that allotted to greasy wool has been increased to take into account the " greasy equivalent " of scoured wool, tops and wool on skins ; and (iii) those allotted to metals have been increased to take into account the metallic contents of ores and concentrates exported. This is the only satisfactory method of dealing with these commodities, for which it is not possible to secure satisfactory export price quotations in their own right.

EXPORT PRICE INDEX : COMMODITIES AND WEIGHTING SYSTEM.

(FROM 1ST JULY, 1936.)

Item.	Unit of Quantity.	Quantity " Multipliers ".	Percentage Distribution of Aggregative Value.			
			Base Period 1936–37 to 1938–39.		Year 1946–47.	
			Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Wool	lb.	975,000,000	49.05	45.63	38.88	37.27
Wheat (*a*)	Bushel	101,000,000	18.34	17.06	29.32	28.10
Butter	Cwt.	2,140,000	12.21	11.36	9.93	9.52
Metals—						
Silver	Oz. (standard)	7,300,000	0.68	0.64	0.75	0.72
Copper	Ton	3,600	0.20	0.20	0.09	0.09
Tin	„	1,300	0.31	0.28	0.26	0.25
Spelter	„	99,000	2.05	1.90	2.67	2.56
Lead	„	208,500	4.10	3.81	6.82	6.53
Meats—						
Beef	lb.	182,000,000	2.56	2.38	1.79	1.72
Lamb	„	138,000,000	3.56	3.31	2.20	2.11
Mutton	„	44,000,000	0.58	0.54	0.35	0.34
Pork	„	16,000,000	0.43	0.40	0.30	0.30
Sugar	Ton	305,000	2.58	2.40	3.22	3.09
Dried Fruits—						
Sultanas	„	38,200	1.45	1.35	1.02	0.98
Lexias	„	3,000	0.12	0.11	0.08	0.07
Currants	„	13,400	0.37	0.35	0.29	0.28
Tallow	Cwt.	600,000	0.69	0.64	0.99	0.94
Hides—						
Cattle	lb.	28,000,000	0.64	0.59	0.98	0.94
Calf	„	1,800,000	0.08	0.07	0.06	0.06
Gold	Oz. (fine)	937,000	..	6.98	..	4.13
			100.00	100.00	100.00	100.00

(*a*) Includes " wheat equivalent " of flour.

The percentage distributions of the " Aggregative Values " shown in Columns 4 to 7 of the above table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity. The percentage distribution of the base period of the index (1936–37 to 1938–39) only concerns this second aspect, that is, those of Columns 4 and 5, since they indicate the percentage proportions contributed by each commodity to the total percentage movement of the indexes as a whole. Thus, if the price of wool increased by 5 per cent., its contribution would be 5 x .4905, or 2.45 per cent. to the index as a whole (excluding gold), and 5 x .4563, or 2.28 per cent. to the total index (including gold)—and similarly for any other commodity or group of commodities. The percentage distributions of Columns 6 and 7, on the other hand, would only become of significance from this aspect if the year 1946–47 were chosen at any time as a new base period for the index.

The following table gives export price index numbers for Australia for individual commodities, groups of commodities, and all groups combined for the financial years 1936–37 to 1946–47 and monthly for the years 1945–46 and 1946–47. For convenience of reference, the percentage distributions of the " Aggregative Values " of the base period referred to above are repeated at the head of this table. The prices used are those at which current sales are being effected as distinct from the prices realized for goods being currently shipped. Normally there is a lapse of some weeks or months between date of sale and date of export and considerable fluctuations occur in prices between the two dates. In respect of *wheat*, however, it has become impossible to determine " prices at which current sales are being effected " because a very large proportion of exportable wheat is sold forward on long term contracts ranging up to five years in duration and between wide price limits. Accordingly, a new series of wheat prices has been substituted for the Australian Wheat Board's current " basic export price " formerly used. This new series is based on average actual realizations for current shipments. In respect of *wool*, " prices at which current sales are being effected " can be determined during the selling season, but complexity of the market due to great diversity of types renders it difficult to attain precision, and recent prices are subject to possible revision.

EXPORT PRICE INDEXES: AUSTRALIA.

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section: Average of three years ended June, 1939 = 1,000.)

Period.	Wool.	Wheat.	Butter.	Metals. (*a*)	Meats. (*b*)	Sugar.	Dried Fruits. (*c*)	Tallow.	Hides. (*d*)	Gold.	All Groups. Excluding Gold.	All Groups. Including Gold.
(*e*)	45.63	17.06	11.36	6.83	6.63	2.40	1.81	0.64	0.66	6.98	..	100.00
(*f*)	49.05	18.34	12.21	7.34	7.13	2.58	1.94	0.69	0.72	..	100.00	..
1936–37 ..	1,218	1,234	915	1,196	978	1,035	1,026	1,217	1,129	988	1,155	1,144
1937–38 ..	989	1,110	1,074	962	1,066	925	1,034	1,002	999	982	1,024	1,022
1938–39 .	793	656	1,011	842	956	1,040	940	781	872	1,030	821	834
1940–41 ..	1,013	1,016	1,095	945	1,032	1,370	953	817	975	1,214	1,026	1,039
1941–42 ..	1,013	1,045	1,095	1,005	1,092	1,372	1,058	1,139	1,325	1,201	1,047	1,059
1942–43 .	1,165	1,055	1,140	1,004	1,122	1,519	1,116	1,192	1,447	1,188	1,137	1,142
1943–44 ..	1,165	1,155	1,140	1,127	1,132	1,585	1,207	1,231	1,514	1,188	1,169	1,171
1944–45 ..	1,165	1,536	1,474	1,286	1,218	1,715	1,281	1,447	1,471	1,204	1,304	1,298
1945–46 ..	1,165	2,130	1,474	1,956	1,234	2,130	1,374	1,519	1,519	1,223	1,476	1,460
1946–47 ..	1,690	3,046	1,734	3,076	1,393	2,644	1,523	3,038	3,344	1,223	2,065	2,007
1945–46—												
July ..	1,165	1,419	1,474	1,604	1,234	1,976	1,308	1,519	1,502	1,223	1,315	1,309
August ..	1,165	1,589	1,474	1,549	1,234	1,976	1,308	1,519	1,502	1,223	1,342	1,335
September ..	1,165	1,700	1,474	1,800	1,234	1,976	1,308	1,519	1,502	1,223	1,380	1,370
October ..	1,165	1,924	1,474	1,872	1,234	1,976	1,308	1,519	1,502	1,223	1,427	1,413
November ..	1,165	2,068	1,474	1,878	1,234	1,976	1,309	1,519	1,502	1,223	1,453	1,439
December ..	1,165	2,269	1,474	1,851	1,234	1,976	1,309	1,519	1,502	1,223	1,488	1,471
January ..	1,165	2,347	1,474	1,868	1,234	2,283	1,309	1,519	1,502	1,223	1,512	1,494
February .	1,165	2,382	1,474	1,972	1,234	2,283	1,309	1,519	1,502	1,223	1,520	1,506
March ..	1,165	2,424	1,474	2,184	1,234	2,283	1,508	1,519	1,518	1,223	1,554	1,532
April ..	1,165	2,460	1,474	2,247	1,234	2,283	1,508	1,519	1,555	1,223	1,564	1,542
May ..	1,165	2,480	1,474	2,317	1,234	2,283	1,508	1,519	1,555	1,223	1,573	1,551
June ..	1,165	2,504	1,474	2,299	1,234	2,283	1,508	1,519	1,555	1,223	1,576	1,553
1946–47—												
July ..	1,165	2,516	1,734	2,552	1,234	2,283	1,508	3,038	2,495	1,223	1,645	1,617
August .	1,165	2,605	1,734	2,623	1,234	2,283	1,508	3,038	2,687	1,223	1,669	1,638
September .	1,540	2,653	1,734	2,717	1,234	2,283	1,508	3,038	3,020	1,223	1,873	1,829
October ..	1,621	2,720	1,734	2,833	1,446	2,283	1,508	3,038	3,026	1,223	1,946	1,897
November	1,735	2,762	1,734	2,911	1,446	2,283	1,508	3,038	3,360	1,223	2,010	1,963
December ..	1,735	2,876	1,734	2,955	1,446	2,283	1,508	3,038	3,705	1,223	2,042	1,987
January ..	1,810	3,071	1,734	3,166	1,446	3,004	1,508	3,038	3,679	1,223	2,150	2,086
February	1,886	3,316	1,734	3,151	1,446	3,004	1,508	3,038	4,070	1,223	2,238	2,160
March	1,886	3,463	1,734	3,203	1,446	3,004	1,508	3,038	3,900	1,223	2,207	2,195
April .	1,886	3,527	1,734	3,580	1,446	3,004	1,569	3,038	3,731	1,223	2,301	2,228
May .	1,923	3,171	1,734	3,630	1,446	3,004	1,569	3,038	3,392	1,223	2,312	2,237
June .	1,923	3,545	1,734	3.525	1,446	3,004	1.569	3,038	3,052	1,223	2,316	2,241

(*a*) Non-Ferrous—silver, copper, tin, spelter, lead. (*b*) Beef, lamb, mutton, pork. (*c*) Sultanas, lexias, currants. (*d*) Cattle hides calf skins. (*e*) Percentage distribution of base aggregate for " All Groups (including Gold) "—applicable from 1936–37. (*f*) Percentage distribution of base aggregate for " All Groups (excluding Gold) "—applicable from 1936–37.

4. **Monthly Index (Changing Weights).**—The second series of the new index-numbers is designed merely for comparisons with the corresponding month, or period of months, of the previous year. The same price quotations are used, but the " multipliers " are much more closely in accord with the actual experience of the periods in question.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month had been the same as their proportions in the corresponding month of the previous year. Accordingly the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index-numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives the two index-numbers are multiplied together and the square root of the product extracted.* This is taken to be the index-number for the month, the prices of the corresponding month of the previous year being taken as base.

The index-numbers for two or more months of one year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process merely involves the cumulative addition of the aggregates computed for the individual months, and extraction of the index-numbers as explained above.

Index numbers computed on this basis are shown in the following table for the years 1945–46 and 1946–47 :—

MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS) : AUSTRALIA.

(*Base : Weighted Average Price Level in corresponding months of preceding year* = 1,000.)

Month.	1945–46.		1946–47.	
	Month stated compared with same month of preceding year.	*Period of trade year ending in month stated* compared with same period of preceding year.	*Month stated* compared with same month of preceding year.	*Period of trade year ending in month stated* compared with same period of preceding year.
July	1,059	1,059	1,107	1,107
August	1,076	1,067	1,158	1,132
September	1,081	1,071	1,320	1,191
October	1,102	1,078	1,354	1,232
November..	1,070	1,077	1,387	1,262
December	1,127	1,086	1,364	1,277
January	1,087	1,086	1,424	1,299
February	1,082	1,086	1,487	1,324
March	1,101	1,087	1,513	1,346
April	1,122	1,091	1,486	1,361
May	1,118	1,094	1,493	1,375
June	1,113	1,096	1,495	1,387

Monthly export price index-numbers are issued in regular press notices, in the *Monthly Review of Business Statistics* and in the *Quarterly Summary of Australian Statistics*.

§ 16. External Trade of Australia and other Countries.

1. **Essentials of Comparisons.**—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would rise from the different methods of converting

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* Up to 1941–42, Professor Irving Fisher's "Ideal" Formula, No. 353 was used, but from 1942–43 the "Edgeworth-Marshall", No. 2153 was substituted, which on Fisher's own assertion gives practically identical results and satisfies all the requirements of his "Ideal" Index.

the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total trade.

2. **"Special Trade" of Various Countries.**—Special trade may be defined according to the interpretation of the British Board of Trade, as (*a*) imports entered for consumption in the country (as distinguished from imports for transhipment or re-export), and (*b*) exports of domestic products.

In the following table the figures, which represent Australian currency values, relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The latest figures relating to foreign countries have been extracted from the publications of the United Nations and converted to Australian currency.

IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY): VARIOUS COUNTRIES, 1946.

Country.	Trade.			Trade per Inhabitant.								
	Imports.	Exports.	Total.	Imports.			Exports.			Total.		
	£'000,000	£'000,000	£'000,000	£	s.	d.	£	s.	d.	£	s.	d.
Australia (*a*) ..	228.9	304.3	533.2	30	8	10	40	9	5	70	18	3
United Kingdom	1,623.4	1,142.2	2,765.6	34	8	3	24	4	3	58	12	6
Canada ..	571.3	684.6	1,255.9	46	8	11	55	13	2	102	2	1
India ..	221.5	242.6	464.1	0	14	3	0	15	8	1	9	11
New Zealand..	72.3	96.2	168.5	41	0	9	54	12	6	95	13	3
Argentine Republic ..	176.9	302.6	479.5	12	10	3	21	8	4	33	18	7
Belgium ..	372.7	210.2	582.9	44	13	4	25	3	8	69	17	0
Brazil ..	213.5	299.0	512.5	4	12	5	6	9	6	11	1	11
Czechoslovakia	63.8	89.4	153.2	5	6	2	7	9	0	12	15	2
Denmark ..	185.1	104.3	289.4	45	2	7	25	8	8	70	11	3
France ..	611.1	265.0	876.1	15	8	8	6	13	10	22	2	6
Netherlands ..	252.4	91.7	344.1	26	15	9	9	14	8	36	10	5
Norway ..	137.8	75.3	213.1	45	6	5	24	15	3	70	1	8
Portugal ..	83.2	55.1	138.3	10	2	4	6	14	0	16	16	4
Sweden ..	271.0	203.6	474.6	40	16	11	30	13	5	71	10	4
Switzerland ..	248.1	194.1	442.2	55	15	2	43	12	6	99	7	8
U.S.A. ..	1,498.3	2,951.6	4,449.9	10	12	9	20	19	2	31	11	11

(*a*) Year ended 30th June, 1947.

§ 17. Trade of the United Kingdom with Australia compared with that of Competing Countries.

Proportion of Trade from United Kingdom and Competing Countries.—Since 1908 permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of Customs Duties on certain goods the produce or manufacture of the United Kingdom with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this Chapter.

In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufacturered in the United Kingdom. The imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for the years 1913, 1938–39, 1945–46 and 1946–47 are shown in the following table. The effect of the war is reflected in the proportions of the trade with Germany and Japan during 1945–46 and 1946–47.

AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES: VALUE.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States.	All Countries.
		£	£	£	£	£	£
Foodstuffs of animal origin	1913 ..	301,025	3,093	12,071	6,988	289,229	947,697
	1938–39	376,104	1,244	686	219,975	337,876	2,003,783
	1945–46	210,784	1	..	5	236,064	1,028,925
	1946–47	422,493	1	..	..	245,102	1,649,982
Spirituous and alcoholic liquors	1913 ..	1,227,561	343,394	143,426	1,689	2,805	1,947,248
	1938–39	768,877	73,449	5,411	197	1,478	901,759
	1945–46	360,480	253	..	..	4,038	372,797
	1946–47	363,053	43,958	1	..	1,344	418,709
Apparel, textiles, and manufactured fibres	1913 ..	12,254,561	961,025	1,712,395	475,973	623,542	19,935,750
	1938–39	12,566,861	514,848	630,901	3,187,714	352,912	22,239,513
	1945–46	23,400,926	1,459	..	3	3,114,168	34,839,217
	1946–47	27,156,715	1,288,601	96	93,762	5,966,532	53,748,778
Metals, metal manufactures, and machinery	1913 ..	13,905,483	217,148	2,380,152	7,657	3,817,705	21,670,212
	1938–39	22,853,939	66,889	1,815,380	209,881	8,625,127	39,171,212
	1945–46	24,453,270	251	1,834	1,647	23,114,058	50,814,432
	1946–47	31,218,156	31,763	131,847	498	18,298,559	57,804,026
Paper and stationery	1913 ..	1,789,577	21,930	266,483	10,656	403,679	3,134,750
	1938–39	3,689,414	64,594	396,718	110,781	466,646	7,747,434
	1945–46	2,985,113	1,435	4	..	2,272,733	8,979,418
	1946–47	4,962,598	88,473	1,354	1	1,732,506	14,733,298
Jewellery, timepieces, and fancy goods	1913 ..	521,290	88,070	263,688	19,307	138,217	1,442,292
	1938–39	344,815	39,240	216,516	219,570	152,781	1,793,085
	1945–46	478,141	60	4	21	65,755	1,580,686
	1946–47	2,007,489	50,548	5	53	82,182	3,353,370
Earthenware, cements, glass, etc.	1913 ..	650,138	40,245	453,188	21,493	62,887	1,565,727
	1938–39	1,185,141	21,267	256,170	229,186	112,546	2,335,892
	1945–46	1,993,008	..	14	..	210,218	2,321,382
	1946–47	3,072,515	22,003	329	42	382,512	4,004,260
Drugs, chemicals, and fertilizers	1913 ..	1,020,647	245,426	304,179	139,178	210,758	2,721,902
	1938–39	2,866,205	245,766	597,113	59,683	1,257,108	7,012,188
	1945–46	3,515,434	3,408	168	..	1,406,028	7,782,415
	1946–47	4,818,610	247,831	25	1	1,622,709	10,523,103
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	485,216	68,686	347,045	688	433,837	1,717,035
	1938–39	310,208	6,236	59,336	47,864	143,079	2,116,222
	1945–46	474,590	..	20	596	496,332	3,342,879
	1946–47	1,016,815	4,354	6	1	582,610	6,135,249
Total, above-mentioned imports	1913 ..	32,155,498	1,989,017	5,882,627	683,629	5,982,659	55,082,613
	1938–39	44,961,564	1,033,533	3,978,231	4,284,851	11,449,553	85,321,088
	1945–46	57,871,746	6,867	2,044	2,272	30,919,394	111,062,151
	1946–47	75,038,444	1,777,532	133,663	94,358	28,914,056	152,370,775
Total imports (less bullion and specie)	1913 ..	40,948,803	2,222,631	7,029,325	950,300	10,907,512	78,196,109
	1938–39	50,625,152	1,287,737	5,174,343	5,126,722	18,345,750	124,389,720
	1945–46	73,681,106	27,045	13,067	2,857	51,792,583	194,572,131
	1946–47	81,935,962	1,839,122	156,877	765,573	43,716,676	228,902,500

Stated as percentages the figures in the preceding table are shown below.

AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES : PERCENTAGES.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States.	All Countries.
		%	%	%	%	%	%
Foodstuffs of animal origin	1913 ..	31.77	0.33	1.27	0.74	30.52	100
	1938–39	18.77	0.06	0.03	10.98	16.86	100
	1945–46	20.49	..	..	..	22.94	100
	1946–47	25.61	..	..	..	14.85	100
Spirituous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100
	1938–39	85.26	8.15	0.60	0.02	0.16	100
	1945–46	96.70	..	..	..	1.08	100
	1946–47	86.71	10.50	..	..	0.32	100
Apparel, textiles, and manufactured fibres	1913 ..	61.48	4.82	8.59	2.39	3.13	100
	1938–39	56.51	2.32	2.84	14.33	1.59	100
	1945–46	67.17	..	..	..	8.94	100
	1946–47	50.53	2.40	..	0.17	11.10	100
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100
	1938–39	58.34	0.17	4.63	0.54	22.02	100
	1945–46	48.12	..	..	..	45.49	100
	1946–47	54.01	0.06	0.23	..	31.66	100
Paper and stationery	1913 ..	57.09	0.70	8.50	0.34	12.88	100
	1938–39	47.62	0.83	5.12	1.43	6.02	100
	1945–46	33.24	..	..	..	25.31	100
	1946–47	33.68	0.60	0.01	..	11.76	100
Jewellery, timepieces, and fancy goods	1913 ..	36.14	6.11	18.28	1.34	9.58	100
	1938–39	19.23	2.19	12.07	12.25	8.52	100
	1945–46	30.25	..	..	..	4.16	100
	1946–47	59.86	1.51	..	..	2.45	100
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100
	1938–39	50.74	0.91	10.97	9.81	4.82	100
	1945–46	85.85	..	..	..	9.06	100
	1946–47	76.73	0.55	..	..	9.55	100
Drugs, chemicals, and fertilizers	1913 ..	37.49	9.02	11.18	5.11	7.74	100
	1938–39	40.87	3.50	8.52	0.85	17.93	100
	1945–46	45.17	..	..	..	18.07	100
	1946–47	45.79	2.36	..	..	15.42	100
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100
	1938–39	14.66	0.29	2.80	2.26	6.76	100
	1945–46	14.19	..	..	..	14.85	100
	1946–47	16.57	0.07	..	..	9.50	100
Total, above-mentioned articles	1913 ..	58.38	3.61	10.68	1.24	10.86	100
	1938–39	52.69	1.21	4.66	5.02	13.42	100
	1945–46	52.11	..	..	..	27.84	100
	1946–47	49.25	1.17	0.09	0.06	18.98	100
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100
	1938–39	40.70	1.04	4.16	4.12	14.75	100
	1945–46	37.87	..	..	..	26.62	100
	1946–47	35.80	0.80	0.07	0.33	19.10	100

The total value of the commodities included in the competitive classes increased from £55,082,613 during 1913 to £122,631,560 during 1926–27, but declined during the economic depression to £37,681,869 in 1931–32. Subsequently the total value rose to £97,754,992 in 1937–38 only to fall away again in 1938–39 to £85,321,088. In 1946–47 it had increased to £152,370,775. The principal classes of competitive imports are (*a*) metals, metal manufactures and machinery (value £57,804,026 in 1946–47) and (*b*) apparel, textiles and manufactured fibres (value £53,748,778 in 1946–47). The value of goods included in these two groups represented 73.2 per cent. of the total value of competitive commodities during 1946–47.

In 1938–39 the United Kingdom supplied 52.70 per cent. of the total value of competitive goods. In 1913 the corresponding figure was 58.38 per cent. and in 1946–47 49.25 per cent.

The share of Japan in the competitive trade increased in proportion to other countries from 1.24 per cent. in 1913 to 5.02 per cent. in 1938–39. In 1946–47 owing to the effects of war it was reduced to 0.06 per cent.

The position of the United States of America in the competitive trade improved from 10.86 per cent. in 1913 to 13.42 per cent. in 1938–39 and to 18.98 per cent. in 1946–47.

The position of France declined from 3.61 per cent. in 1913 to 1.21 per cent. in 1938–39 and to 1.17 in 1946–47.

The proportion of the competitive imports supplied by Germany was 10.68 per cent. in 1913, and 4.66 per cent. in 1938–39. In consequence of the war, the proportion of imports from Germany during 1946–47 was 0.09 per cent.

§ 18. Oversea Trade in Calendar Years.

For the purpose of comparison with countries which record oversea trade in calendar years the following table has been compiled to show Australian imports and exports for each quarter of the calendar years 1939 and 1944 to 1947 :—

OVERSEA TRADE IN CALENDAR YEARS : AUSTRALIA.

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
QUARTER ENDED MARCH.						
1939	31,434	30,905	1,016	4,361	32,450	35,266
1944	65,228	36,349	550	1	65,778	36,350
1945	58,685	35,243	610	1	59,295	35,244
1946	44,866	51,098	344	23,102	45,210	74,200
1947	57,023	73,702	288	22	57,311	73,724
QUARTER ENDED JUNE.						
1939	29,461	26,309	772	4,798	30,233	31,107
1944	50,680	32,520	987	1	51,667	32,521
1945	60,397	39,139	410	2	60,807	39,141
1946	45,943	60,859	298	7	46,241	60,866
1947	70,645	79,842	300	6	70,945	79,848
QUARTER ENDED SEPTEMBER.						
1939	31,166	24,596	957	4,778	32,123	29,374
1944	59,128	39,410	736	3	59,864	39,413
1945	55,442	40,029	920	2	56,362	40,031
1946	50,266	81,229	246	46	50,512	81,275
1947	87,182	66,155	445	371	87,627	66,526
QUARTER ENDED DECEMBER.						
1939	28,061	41,918	1,349	6,185	29,410	48,103
1944	54,811	39,470	1,298	3	56,109	39,473
1945	48,321	44,438	234	3,753	48,555	48,191
1946	50,969	74,111	287	46	51,256	74,157

OVERSEA TRADE IN CALENDAR YEARS : AUSTRALIA—*continued.*

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
			TOTAL FOR YEAR.(a)			
1939	120,122	123,728	4,094	20,122	124,216	143,850
1944	229,847	147,749	3,571	8	233,418	147,757
1945	222,845	158,849	2,174	3,758	225,019	162,607
1946	192,044	267,297	1,175	23,201	193,219	290,498

(a) Excludes estimated unrecorded exports, £'000, 1943–44, 10,000 and 1944–45, 2,000.

§ 19. Excise.

Although excise goods have no immediate bearing on oversea trade the rates of excise duty are in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Trade and Customs it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of Customs and Excise Revenue are shown in Chapter XV. " Public Finance ". The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1943–44 to 1946–47 as compared with the year 1938–39.

QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID : AUSTRALIA.

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits—					
Brandy	198,583	304,213	326,993	383,285	329,068
Gin	269,118	460,819	491,046	769,452	601,691
Whisky	157,705	394,857	371,688	385,502	371,574
Rum	347,648	336,008	304,686	606,386	580,203
Liqueurs	5,705	37,842	41,278	85,537	68,790
Spirits, n.e.i.	170	220	424	26,184	4,601
Spirits for Industrial or Scientific Purposes ..	114,129	211,138	207,366	202,997	203,224
Spirits for Fortifying Wine	770,997	1,581,048	1,759,546	1,224,989	1,511,407
,, ,, making Vinegar	17,965	69,015	70,305	71,649	62,930
	gal.	gal.	gal.	gal.	gal.
Amylic Alcohol and Fusel Oil	23	129	36	16	62
Methylated Spirit ..	..	3,341,131	3,511,612	2,664,573	853,660

QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA—*continued.*

Article.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits for the manufacture of Essences	57,376	72,556	89,398	91,372	92,393
Spirits for the Manufacture of Scents, etc.	47,778	123,117	115,190	110,805	101,979
	gal.	gal.	gal.	gal.	gal.
Beer	83,904,645	94,323,856	94,578,430	99,669,860	119,473,969
	lb.	lb.	lb.	lb.	lb.
Tobacco — Manufactured, n.e.i. ..	15,734,675	16,641,335	15,219,618	16,603,789	19,066,568
Hand-made ..	41,774	..	..	..	..
Unmanufactured, etc...	5,604,256	..	..	..	..
Total, Tobacco ..	21,380,705	16,641,335	15,219,618	16,603,789	19,066,568
	lb.	lb.	lb.	lb.	lb.
Cigars—Machine-made ..	71,051	48,151	38,212	37,007	32,028
Hand-made ..	187,450	86,468	77,418	91,217	110,577
Total, Cigars ..	258,501	134,619	115,630	128,224	142,605
	lb.	lb.	lb.	lb.	lb.
Cigarettes—Machine-made ..	6,891,144	7,980,175	7,413,219	7,914,168	9,042,625
Hand-made ..	114	..	..	..	..
Total, Cigarettes ..	6,891,258	7,980,175	7,413,219	7,914,168	9,042,625
		lb.	lb.	lb.	lb.
Snuff	..	585	662	583	660
	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.
Cigarette Tubes and Papers	101,977,824	120,223,568	109,594,422	94,130,600	129,244,343
	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.
Matches	3,278,759	2,998,769	2,989,582	2,876,602	3,414,990
	gal.	gal.	gal.	gal.	gal.
Petrol	27,878,912	10,399,209	9,324,996	10,290,139	28,237,869
	doz. packs.	doz. packs.	doz. packs.	doz. packs.	doz. packs.
Playing Cards	117,412	88,761	87,836	74,579	91,603
		lb.	lb.	lb.	lb.
Carbonic Acid Gas ..	..	6,278,607	6,421,510	6,794,722	2,472,991
Dry Batteries and Cells ..	..	2,908,705	3,635,369	4,578,057	2,488,400
Saccharin	..	7,366	4,779	5,570	12,199

§ 20. Interstate Trade.

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (Section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the latest published statements were for the year 1909. Later the Governments of Western Australia and Tasmania revived the records, and statistics of the subject are available again for those States.

At the Conference of Statisticians held in January, 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

The Government Statist for South Australia publishes some figures for that State made up from the records of Western Australia and Tasmania, and from various other sources. Since February, 1940, statistics in some detail have been collected by the Government Statistician of Queensland. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbour Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.

CHAPTER XII.—LABOUR, WAGES AND PRICES.

A.—RETAIL PRICES AND PRICE INDEXES.

§ 1. Collection of Information as to Retail Prices.

The retail prices of the extensive range of commodities and services in common demand (commonly referred to as the "regimen") used in compiling the All Items ("C" Series) Retail Price Index have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year 1914 to 1922 for each of the six capital cities. The complete list of items covered by the retail price regimen is published in the annual *Labour Report*, and a summary of the main groups and sections of the regimen is given in § 6 hereof.

The retail prices of food and groceries in approximately 200 towns throughout Australia were collected as at November of each year from 1913 to 1942, when collection was temporarily suspended as a war-time economy.

Retail prices of food and groceries and average rentals of houses for earlier years extending back to 1901 were collected by this Bureau, and in some cases have been recorded by the Statisticians of various States as far back as 1864.

The methods by which prices used in the "C" Series Retail Price Index are ascertained and the measures adopted to ensure their accuracy and comparability are briefly as follows :—

(i) Representative and reputable retailers are selected for each city and town covered by the Index and each is required to furnish a return of prices monthly in respect of food and groceries and quarterly in respect of other items. Prices for each item are obtained where practicable from about ten retailers in each of the capital cities, and from about five retailers in each of the provincial towns.

(ii) These returns are collected under authority of the *Census and Statistics Act* 1905–1946, which requires that returns be supplied accurately and promptly and ensures that particulars supplied by individual retailers will not be divulged to competitors or to any other person or Government authority. Penalties are provided against failure to supply returns, against supplying false information and against failure to answer truthfully any question asked by an authorized officer in respect of the contents of the return.

(iii) The actual collection of returns is carried out by qualified Field Officers of the Commonwealth Bureau of Census and Statistics working under the supervision of the Statisticians of the respective States. These Field Officers have very wide powers of investigation, including entry of premises and inspection of goods, records, etc.

(iv) The Field Officers not only receive and check returns but visit the retail shops concerned, whenever necessary, to verify returns. In respect of articles of clothing and the like, where variation of quality may be considerable, Field Officers are equipped with samples of the goods used for price comparisons. In such cases the Field Officers visit every retail informant at each quarterly collection and personally inspect the relevant goods and prices thereof.

(v) Before each quarterly collection Supervising Field Officers review the standards of the whole of the items for which prices are collected after making extensive inquiries among manufacturers, wholesalers and retailers. These Supervising Field Officers periodically accompany Field Officers at their price collections and check their work. This not only ensures accuracy and assiduity but also that all Field Officers work on uniform lines and that, as far as care and effort can make it possible, prices for identical goods and quality will be recorded at all times and for all places.

(vi) The list of items in the regimen and the standards thereof are revised from time to time to keep them in harmony with changing conditions. Where such changes become necessary suitable adjustment is made in computing the retail price index to ensure that it reflects changes in price with due precision and that it is not vitiated by the influence of other changes. (See also § 8 hereof.)

(vii) Returns of rents for unfurnished houses of four and five rooms are made at the middle of each quarter by a representative number (ranging up to 30) of house agents in each city and town covered by the Index, for brick and wooden houses respectively, classified according to number of rooms. These returns show the weekly rental of a substantial number of individual houses, each of which is selected by the Field Officer as suitable for inclusion in a sample designed to measure the quarterly ratio of change in weekly rentals. The aim is to measure variations which may be equivalent to change in price for a constant standard. The ratio of change is used to vary basic average rentals derived from the Census of 1933 and other records. Although expressed in money terms, the average rentals as published are essentially indexes. As such they do not necessarily indicate the average amount of rental actually paid for all rented houses, and still less do they indicate the rental at which vacant or new houses can be rented.

§ 2. Retail Price Indexes.

1. **General.**—The basic principle of a retail price index is relatively simple. It is to select commodities representative of the field to be covered and to combine their prices at regular intervals in accordance with their relative importance in that field. The aim is to measure the degree of change in prices for the selected field taken as a whole.

In practice the application of this principle over a term of years presents great difficulty by reason of the numerous changes which occur in the type, grade and relative quantities of many of the items commonly used.

A full explanation of the methods adopted and an analysis of problems involved is contained in the Appendix to *Labour Report* No. 9.

For convenience the group of selected items is called a "regimen", and the quantities consumed per annum of each item used in the index are called "mass units" or "weights". These terms are used herein. In compiling the index the price of each item is multiplied by its quantity "weight", and then by its appropriate population or household "weight". The sum of these products for all items at any given date represents an "aggregate expenditure". The "aggregate expenditures" for successive periods are converted into an index by denoting the aggregate of a selected or "base" period as 1,000, and calculating all index-numbers to such base by the proportions which their aggregates bear to that of the base period. (See also § 6 (2) hereof.)

2. **Essential Features.**—Apart from clear thinking, common sense and sound arithmetic, the prime essentials in compiling a retail price index are—

(*a*) that prices be accurately ascertained at regular intervals for goods of constant grade and quality;
(*b*) that the regimen be as representative as possible of the field to be covered;
(*c*) that the weights be in approximate proportion to quantities actually used in the selected field.

3. **The Regimen.**—The regimen must be a selected regimen because it is impossible in practice to ascertain at regular intervals prices of every item of goods and services entering into household expenditure. Even in normal times there is considerable difficulty in ensuring that the selected items are always a true sample. Some items which it would be desirable to include must be excluded because comparative prices cannot be accurately ascertained for them at different times and different places. It is deemed better to limit the regimen of the index to items for which price variations can be ascertained with reasonable accuracy than to distend the regimen by including items for which price comparisons are necessarily inaccurate. Similarly, many items of small aggregate or individual importance are excluded. The regimen of the index therefore is not (as is sometimes erroneously supposed) a basic wage regimen nor yet is it a full list of component items in a standard of living. It does not imply that any particular goods or any selected grades or quantities of these goods should enter into determination of a basic or living wage. In fact the regimen used for the "C" Series Retail Price Index is simply a selected list of items combined in certain proportions for purpose of measuring price variations. The items are representative of the fields covered, and the proportions approximate to those in average consumption so far as can be ascertained.

The regimen and "weights" used in the "C" Series Retail Price Index are published in full in the annual *Labour Report.* The regimen at the moment comprises 160 commodities and services, consisting of 20 items of Groceries; 6 of Dairy Produce; 15 of Meat; 1 of Rent; 77 of Clothing and Footwear; and 41 of Miscellaneous Household Expenditure comprising Household Drapery (9), Household Utensils (20), Fuel and Light (4), Union and Lodge Dues, Medicine, Newspapers, Recreation, Smoking, Fares and School Requisites (8).

4. **Purpose of Retail Price Indexes.**—The retail price indexes are designed to measure the extent of changes in price levels only. While they may be used as indicating proportionate variations in cost of a *constant* standard of living, they do not measure the absolute cost of any standard of living, nor the cost of changes in the standard of living. In other words, they measure, as nearly as may be, the proportionate change in aggregate cost of specified quantities and qualities of the selected regimen of items included in the index. The regimen is representative of a high proportion of the expenditure of wage-earner households.

5. **Effects of War Conditions on Indexes.**—Under war-time conditions scarcity of certain types of goods, erratic supply and changes of grade due to standardization have created unusual difficulty in obtaining the data necessary for measuring variations in prices. In some instances, this has rendered it necessary to substitute new grades,

qualities or types of articles for those formerly used as indicators of changes in price. This has been the case more particularly in the clothing, household drapery and household utensils sections of the regimen. Substitutions of similar kind were necessary at times under normal conditions in order to meet changes of fashion and usage. In themselves, such substitutions are not injurious to the index provided the transitional difficulties can be solved as they arise. No change in principle is involved. The index continues to measure as accurately as may be, price variations, and price variations only. Just as in the pre-war period, application of multipliers (called "grafting factors") serves to neutralize those differences in prices which are solely due to substitution of a new item for one which has ceased to be available or in common use. The net effect of this process is that the price of the old item is taken as typical of price variation in its class up to the time of substitution, and the prices of the new item as typical of such changes in price thereafter.

In normal times, popular usage of items in general consumption changes slowly, and the weight of items and groups in the regimen is changed only at long intervals. In war-time, scarcity of supplies of some goods, rationing and kindred factors actually produce substantial changes in usage both long term and short term. The weights applicable to the items in the regimen, however, have not been changed and continue as in pre-war years. (See § 8 (3) hereof.)

The "C" Series Index, as published, measures the aggregate variation in prices of the regimen of items adopted in peace times in peace-time proportion. This ensures comparability of the index on that specific basis. Its practical significance under war conditions is limited because a single index cannot take into account all changes that occur.

If it were practicable, it would be desirable to compile an additional index to measure variations over the war period, having regard to the fact that the relative consumptions of some items of the regimen have been altered by war conditions, and that the prices of some items not included in the regimen have moved differently from the variations recorded by the "C" Series Index. This would provide an alternative method of comparison presenting another aspect of price movement in war-time.

§ 3. Various Series of Retail Price Index-Numbers.

Two main series of retail price index-numbers are compiled and shown in some detail in the following pages, viz. :—

(i) the "B" Series Index relating only to food, groceries and housing, continuously available since 1907;
(ii) the "C" Series Index relating to food, groceries, housing, clothing, household drapery and utensils, fuel and light, and other miscellaneous items of household expenditure, continuously available from 1914.

The "B" Series Index comprises only the food, groceries and housing sections of the "C" Series Index.

The "C" Series Index in total, subject to consideration of special war-time influences, provides a reliable measure of aggregate variations in retail prices (as well as of group indexes for component sections) of a high percentage of goods and services used in wage-earner households. This index is compiled for—

(*a*) the capital city of each of the six States,
(*b*) four other principal towns in each of the six States,
(*c*) the weighted average of five towns (including capital city) in each of the six States,
(*d*) the weighted average for the six capital cities combined,
(*e*) the weighted average for the thirty towns (including capital cities),
(*f*) separate indexes for Warwick, Port Augusta, Whyalla (commenced September quarter, 1946) and Canberra.

The "C" Series Index forms the basis of the "Court" Series Index used by the Commonwealth Court of Conciliation and Arbitration for the "cost of living" adjustments of wages prescribed by awards made by the Court. (See § 9 of this Chapter.)

§ 4. Retail Price Levels ("C" Series Index) 1914-1946.

The aggregate indexes for 1914, 1921, 1929, 1939 and 1941 to 1946 for the Thirty Towns are published in summary form on page 449 hereof, while the following table furnishes the relevant index-numbers for the Six Capital Cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(*Base :* 1923–27 = 1,000.)

1914, November	687	(Beginning of War I.)
1918, November	905	(End of War I.)
1920, November	1,166	(Post-War peak)
1922, November	975	(Post-War trough)
1929, Year	1,033	(Pre-Depression peak)
1933, Year	804	(Depression trough)
1939, September Quarter	916	(Pre-War II.)
1943, March Quarter	1,123	(Pre-Price Stabilization)
1943, June Quarter	1,143	(War II. peak)
1945, September Quarter	1,126	(End of War II.)
1945, December Quarter	1,129	
1946, December Quarter	1,156	

The index reveals a rise of approximately 32 per cent. during the first world war, followed by a further rise of 29 per cent. in the two post-war years (November, 1918, to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943, the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920; while at December quarter, 1946, the level was almost identical with that of the 1920 peak period.

Immediately after the outbreak of the war price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the first world war in 1914.

An account of price control measures and of price stabilization in Australia is published on pp. 458–463.

The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table :—

THE ALL ITEMS (" C " SERIES) RETAIL PRICE INDEX AND ITS " GROUP " INDEX-NUMBERS(*a*) FOR THE SIX CAPITAL CITIES COMBINED, 1914 TO 1946.

(*Base of Each Group : Weighted Average of Six Capital Cities,* 1923–27 = 1,000)

Period.	Food and Groceries.	Rent (4 and 5 Rooms). (*b*)	Food, Groceries and Rent (4 and 5 Rooms) (" B " Series).	Clothing.	Miscellaneous.	All Items (" C " Series) Index.
1914 (*c*)	641	649	644	754	749	687
1915 (*c*)	842	659	777	792	786	782
1916 (*c*)	812	665	760	881	802	795
1917 (*c*)	836	685	782	992	882	847
1918 (*c*)	861	722	812	1,097	972	905
1919 (*c*)	1,026	768	934	1,238	1,036	1,022
1920 (*c*)	1,209	851	1,082	1,365	1,194	1,166
1921 (*c*)	950	877	924	1,246	1,010	1,013
1922 (*c*)	945	929	939	1,052	999	975
1923	1,009	950	988	1,045	999	1,003
1924	969	988	975	1,003	1,004	987
1925	998	1,008	1,002	991	992	997
1926	1,023	1,026	1,024	986	998	1,011
1927	1,000	1,030	1,011	975	1,008	1,002
1928	985	1,066	1,014	997	1,010	1,009
1929	1,044	1,073	1,054	996	1,007	1,033
1930	941	1,047	978	951	999	975
1931	826	901	852	853	973	873
1932	796	817	803	804	958	830
1933	751	804	768	787	950	804
1934	783	810	792	785	944	817
1935	806	839	818	783	946	832
1936	825	879	844	792	947	850
1937	851	912	872	811	960	873
1938	886	942	906	829	961	897
1939	927	965	939	841	962	920
1940	939	973	950	956	998	957
1941	947	976	956	1,118	1,060	1,008
1942	1,031	976	1,007	1,308	1,112	1,091
1943	1,037	975	1,011	1,440	1,160	1,131
1944	1,026	976	1,004	1,435	1,165	1,126
1945	1,034	975	1,009	1,425	1,161	1,126
1946	1,036	976	1,010	1,505	1,167	1,145
Quarter—						
1939—March	935	959	942	832	960	919
June	925	963	938	836	961	917
September	920	967	936	836	961	916
December	927	969	941	858	967	926
1942—March	991	977	983	1,216	1,095	1,053
June	1,025	976	1,003	1,285	1,099	1,081
September	1,055	976	1,022	1,342	1,110	1,106
December	1,051	976	1,019	1,388	1,144	1,122
1943—March	1,040	975	1,012	1,409	1,149	1,123
June	1,058	975	1,023	1,466	1,158	1,143
September	1,036	975	1,010	1,450	1,165	1,133
December	1,015	975	997	1,436	1,168	1,123
1944—March	1,020	976	1,000	1,434	1,166	1,124
June	1,026	976	1,004	1,429	1,165	1,125
September	1,036	975	1,010	1,433	1,164	1,129
December	1,022	975	1,002	1,442	1,163	1,126
1945—March	1,028	975	1,005	1,421	1,161	1,123
June	1,037	975	1,011	1,416	1,161	1,125
September	1,040	975	1,013	1,415	1,161	1,126
December	1,030	975	1,007	1,448	1,161	1,129
1946—March	1,036	976	1,010	1,456	1,164	1,134
June	1,042	976	1,014	1,494	1,167	1,145
September	1,029	976	1,006	1,521	1,167	1,146
December	1,037	976	1,011	1,550	1,170	1,156

(*a*) See footnote (*a*) on page 443. (*b*) See footnote (*b*) on page 443. (*c*) November.

§ 5. Increases in Retail Prices since Outbreak of War in 1939.

1. **Australia.**—The following statement shows for the Six Capitals separately, and as a whole, the percentage increases which have taken place in retail prices of items included in the "C" Series Index from the September quarter, 1939 to the December quarter, 1946, inclusive. The proportionate increase in the total index for each capital city is shown in the line marked "Total". The column headed "C" Series Index dissects the total percentage rise to show what part of it was due to the rise in prices in each of the four main groups of items. Thus, of the 26.2 per cent. increase for Sydney 4.5 was due to food and groceries, 0.1 to house rent, 16.9 to clothing and 4.7 to miscellaneous items. The column headed "Group Index" shows the percentage increase in prices of items in each group considered as a group. Thus for Sydney, prices in the food and groceries group increased by 12.6 per cent., house rents by 0.4 per cent., prices of clothing by 84.9 per cent. and prices of miscellaneous items by 25.1 per cent. These when weighted and combined in the proportions of the "C" Series Index showed a rise of 26.2 per cent. For the Six Capital Cities as a whole the increase over the war period shown was 26.2 per cent.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX.

PERCENTAGE INCREASES SEPTEMBER QUARTER, 1939 TO DECEMBER QUARTER, 1946.

Group.	Sydney.		Melbourne.		Brisbane.	
	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Food and Groceries	4.5	12.6	4.4	12.0	5.8	16.5
House rent ..	0.1	0.4	0.4	1.7	0.2	0.9
Clothing ..	16.9	84.9	17.4	88.5	18.2	86.1
Miscellaneous ..	4.7	25.1	3.8	19.6	4.0	19.5
Total ..	26.2	26.2	26.0	26.0	28.2	28.2

Group.	Adelaide.		Perth.		Hobart.		Six Capitals.(*a*)	
	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Food and Groceries	4.3	12.2	4.3	11.4	6.7	18.3	4.6	12.7
House rent ..	0.1	0.6	0.1	0.6	0.2	1.0	0.2	0.9
Clothing ..	16.3	77.6	17.3	85.2	17.2	82.9	17.2	85.4
Miscellaneous ..	4.2	19.8	4.0	20.4	3.5	18.1	4.2	21.7
Total ..	24.9	24.9	25.7	25.7	27.6	27.6	26.2	26.2

(*a*) Weighted average.

The foregoing comparisons refer to two points of time (i.e., the months immediately preceding the war and the closing months of 1946, at each of which special temporary factors may have influenced relative price levels. For instance, prices of certain foods (e.g., meat) fluctuate with seasonal conditions. The percentage increases shown do not, therefore, necessarily indicate the degree of increase due solely to causes peculiar to the war and immediate post-war period.

2. **International Comparisons.**—The following table shows the increase during this period in Australia and certain other countries. The increases during the first world war have also been included.

RETAIL PRICE INDEX-NUMBERS.

(FOOD, RENT, CLOTHING, MISCELLANEOUS HOUSEHOLD EXPENDITURE.)

(*A*): 1914–1919.

Date.	Australia.	Great Britain.	Canada.	New Zealand.	Union of South Africa.	United States of America.
	(*a*)				(*b*)	
1914 July	100	100	109	100	100(*c*)	100
1915 Year	114	125	97	108	103	102
1916 ,, ...	116	148	102	115	106	109
1917 ,, ...	123	180	130	125	114	128
1918 ,, ...	132	203	146	135	118	156
1919 ,, ...	149	208	155	145	126	175

(*a*) November. (*b*) Food, Fuel, Light and Rent. (*c*) Average for year 1914.

(*B*): 1939–1946.

Date.	Australia.	Great Britain.	Canada.	New Zealand.	Union of South Africa.	United States of America.
1939—					(*a*)	
September Quarter ..	100	100	100	100	100	100
1940—Year ..	105	119	105	104	104	100
1941— ,, ..	110	128	111	108	109	105
1942— ,, ..	119	129	116	111	118	116
1943— ,, ..	124	128	117	114	126	123
1944—				(*b*)		
March Quarter	123	129	118	114	128	123
June ,,	123	129	118	114	130	124
September ,,	123	130	118	114	129	126
December ,,	123	129	118	114	132	126
Year	123	129	118	114	130	125
1945—						
March Quarter	123	130	118	114	132	126
June ,,	123	131	118	114	133	127
September ,,	123	132	119	114	133	128
December ,,	123	131	119	114	133	128
Year	123	131	119	114	133	127
1946—						
March Quarter	124	131	119	115	134	129
June ,,	125	131	121	115	136	131
September ,,	125	132	124	115	134	143
December ,,	126	131	126	115	136	150
Year	125	131	123	115	135	138

(*a*) Food, Rent and Miscellaneous Expenditure. (*b*) Old Index as varied by new War-time Index (Base December Quarter, 1942 = 100).

At various stages during the first world war most of these countries introduced some measures of price control. But at an early stage in the second world war these countries introduced price control measures which became more stringent as the war progressed, culminating in a policy of price stabilization.

Immediately after the outbreak of war in September, 1939, the Government took steps to control prices, and, by proclamations issued from day to day, pegged prices of various commodities at those ruling on 31st August, 1939. The National Security (Prices) Regulations, proclaimed on 28th September, 1939, under the authority of the National Security Act, established the basic principles of war-time price control, and provided for the appointment of a Commonwealth Prices Commissioner, and conferred upon him extensive powers to control the price of goods declared for that purpose by the Minister for Trade and Customs. A brief summary of the development of this control is published on pages 458–463.

§ 6. Construction of All Items ("C" Series) Retail Price Index.

1. **The Regimen.**—The regimen from which the "C" Series Index is compiled consists of a list of commodities and services which commonly enter into the consumption of the average household, and for which comparative prices can be ascertained with due precision from time to time and from place to place. (*See* § 2 (3 and 4) hereof.) The regimen is divided into the following Groups and Sections :—

Group.	Section.
I. Food and Groceries	A.—Groceries.
	B.—Dairy Produce.
	C.—Meat.
II. Housing	D.—House Rent.
III. Clothing	E.—Clothing—Man.
	F.—Clothing—Woman.
	G.—Clothing—Boy (10½ years).
	H.—Clothing—Girl (7 years).
	J. —Clothing—Boy (3½ years).
IV. Miscellaneous	K.—Household Drapery.
	L.—Household Utensils.
	M.—Fuel and Light.
	N.—Other Miscellaneous.

The "C" Series Index includes the whole of the foregoing Groups, but for many purposes indexes are required for individual Groups or Sections. For this reason the following indexes are regularly compiled at the intervals shown, and published in various publications issued by the Bureau :—

Group.(*a*)	Content.	Frequency.
I.	Food and Groceries	Monthly
II.	Housing (4 and 5 rooms) (*b*)	Quarterly
I. and II.	Food, Groceries and Housing (4 and 5 rooms) ("B" Series)	Quarterly
III.	Clothing	Quarterly
IV.	Miscellaneous Household Requirements ..	Quarterly
I., II., III. and IV.	Food, Groceries, Housing (4 and 5 rooms), Clothing and Miscellaneous ("C" Series) ..	Quarterly
I.	Food and Groceries ("200 Towns" series) (*c*) ..	Yearly

(*a*) "Group" or "Sectional" index-numbers in the various tables throughout this publication cannot be compared with each other in order to show the *relative cost* of Food and Groceries, Housing, Clothing or Miscellaneous requirements, since each "Group" or "Section" (or combination thereof) has its own Base = 1,000, viz., the weighted average cost for the Six Capital Cities as a whole during the five-yearly period 1923–1927 for that "Group" or "Section". (*b*) *Rent.*—The rent index-numbers shown in the tables in this publication measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Similarly, "average rents" where shown are indexes of "price" changes in rentals expressed in terms of pence. They are not the average of rents actually paid by all tenants of 4 and 5-roomed houses. It would be inappropriate to include the average of rents actually paid in an index designed to measure price changes only. The average of rents actually paid is ascertained periodically by Census methods—*see also* page 2 of *Labour Report*, No. 35. (*c*) Compilation suspended as a war-time economy after November, 1942.

For convenience of reference several of the indexes mentioned above have been given the "series" designation shown against them. These indexes are dealt with in turn in the following pages.

2. **The Mass Units (or "Weights").**—The "mass units" (or "weights") are multipliers representing the approximate average annual consumption *per head or per household* under normal conditions. The index-numbers are computed on a "total annual aggregative expenditure" basis, i.e., the total annual expenditure from time to time by a *standard population* in respect of the selected regimen of commodities and services commonly entering into household consumption, and of a constant *standard quality*. As a first step, therefore, it is necessary to multiply the price of each item by its "weight" per head or per household as the case may be. Thus, the "weight" of bread is 100 2-lb. loaves per head; of sugar 100 lb. per head; of towels 3 per household; and of housing 52 rent-weeks per household. The result of this initial calculation is designated the "P.MU" aggregate (i.e., Prices x Mass Units).

The sum of these "P.MU" results for each Section or Group is then multiplied by its appropriate population or household "weight" to produce their respective annual aggregate expenditures. Thus, Sections A to C (Food and Groceries) would be multiplied by the total population; Section D (Housing) by the total number of households; Sections E to J (Clothing) by the proportion of the total population applicable to each; and Sections K to N (Miscellaneous) by the total number of households.

The combination of the aggregates from the last paragraph gives the "total annual aggregate expenditure" for the whole regimen, from which the "C" Series index-number is derived by applying to 1,000 the ratio which the aggregate for any period bears to the aggregate selected as the base period of the Index. In the process of tabulation all prices are converted to pence for these final aggregates.

For tabulating purposes some of these "mass units" are varied when necessary to make up a deficiency or cancel out an excess in the aggregate resulting from a *change in the standard* of any item upon which prices are collected, to ensure that such changes shall not be wrongly recorded by the index as *variations* in prices. The published "mass units", however, still continue to show the correct *relative* consumption "weights" actually applicable to the commodities and services in the regimen for the *constant standards* used in the index. *See* also § 2 (3) and 6 (3) of this Chapter.

In the case of Food and Groceries (Group I.) the "mass units" adopted are approximately the annual average consumption per head for household purposes of the various articles during the years 1927 to 1929. The "weights" allotted to articles of clothing and miscellaneous household requirements (Groups III. and IV.) are based largely on the results of the inquiries of the Royal Commission on the Basic Wage, which reported in 1920 and 1921. After exhaustive inquiries the Commission published a "regimen" for an average working family of five persons, and set out the constituent items in its "Indicator List". This list, so far as it related to the articles in question was followed substantially in the original compilation of the "C" Series Index, and has been adjusted by subsequent investigations of the Bureau to accord with changes in popular usage. The "weights" allotted to the items have not been adjusted to take account of war-time shortages or rationing, and the index therefore measures war-time price changes in relation to a normal (or pre-war) apportionment of household expenditure. (*See* § 2 (5) and § 8 (3) hereof.)

3. **Relative "Aggregate Expenditure" of Items and Groups.**—In the *base period* of the index (average of the years 1923 to 1927) the relative importance of each of the four main groups expressed as a percentage of the weighted average "aggregate expenditure" in the Six Capital Cities (from which all relative index-numbers are derived) was—Food and Groceries, 38.66 per cent.; House Rent, 21.26 per cent.; Clothing, 23.04 per cent., and Miscellaneous, 17.04 per cent., as shown in the third column of the following table. Although the "weights" of each item in the regimen are kept virtually constant, the relative "aggregate expenditure" of the various items and groups will, of course, vary from time to time as relative prices change and, in

addition, the distribution of relative expenditure as between the groups and sections is varied from time to time for "relative weighting" purposes on the basis of the changing relativities of population and households as disclosed by successive Censuses. This, however, does not affect the level of the Index at the point of change, but alters the degree of variation registered by the various groups or sections of the Index.

The percentage distribution for Melbourne in the *base period* was practically identical with that of the Six Capital Cities as a whole, and has continued to be representative of the relative movement of prices in the capital cities up to the present time. For this and other reasons, therefore, the percentage distribution of the Melbourne "aggregate expenditure" for successive December quarters has been published in previous issues of this publication, and the figures for the December quarter, 1946 are shown in the second column of the table for comparison with those of the *base period* of 1923–1927 :—

Group.	Section.	Percentage of Aggregate Expenditure.			
		1923–27 (Base). Six Capital Cities.		Dec. Qtr., 1946. Melbourne.	
I. Food and Groceries	A Groceries	17.44	38.66	11.38	32.49
	B Dairy Produce ..	10.28		9.12	
	C Meat	10.94		11.99	
II. Housing	D House Rent— (4 and 5 rooms) ..	21.26	21.26	19.44	19.44
III. Clothing ..	E Man	8.69	23.04	10.41	29.43
	F Woman	9.12		14.40	
	G Boy, 10½ years ..	2.89		2.10	
	H Girl, 7 years ..	1.36		1.67	
	J Boy, 3½ years ..	0.98		0.85	
IV. Miscellaneous ..	K Household Drapery	1.09	17.04	1.97	18.64
	L Household Utensils	0.49		0.66	
	M Fuel and Light ..	4.92		4.28	
	N Other Miscellaneous	10.54		11.73	
			100.00		100.00

It should be noted, however, that percentage price variations are measured from the "aggregate expenditures" of the *base period* of the index, and the percentages shown in the foregoing table for the *base period* 1923–1927, therefore, are the proportionate "weights" applicable to the various groups and sections in measuring such variations in the index as a whole calculated to *this base period*, and *not* the percentage "weights" of any other period. For example, those shown for the December quarter, 1946 would only become of significance in the measurement of variations if the latter quarter were adopted as a *new base* for the index.

4. **Base Periods of the Indexes.**—The base period originally adopted by the Bureau for its retail price indexes was the year 1911. When the collection of the prices of clothing and miscellaneous items was undertaken for the purposes of the "C" Series Index, the month of November, 1914, was adopted as the base period for this series. The

desirability of computing retail price indexes to a post-war base was considered by a Conference of Statisticians in 1929, and it was resolved that from 1st January, 1930, the five years 1923–27 should be adopted as the base period, and since this date the retail price indexes have been published on this base. The aggregate to which all index-numbers are related is the weighted aggregate cost of the regimen in the six capital cities during the period taken as base, expressed as an index-number of 1,000.

§ 7. Tabular Statements of Retail Price Index-Numbers.

1. **General.**—The results of inquiries into price movements are available in the following publications :—

(i) *Monthly.*—A mimeographed statement is published each month giving index-numbers for Food and Groceries. The *Monthly Review of Business Statistics* contains annual, quarterly and monthly index-numbers to the latest available date.

(ii) *Quarterly.*—A mimeographed statement is issued about three weeks after the end of each quarter giving the " C " Series index-numbers for that quarter and immediately preceding quarters in respect of each of the 30 cities and towns originally adopted and for certain other towns, e.g., Canberra, for which the " C " Series Index is now compiled. The *Quarterly Summary of Australian Statistics* contains annual, quarterly and monthly index-numbers to the latest available date. This publication also contains the average prices of the items comprising the Food and Groceries regimen, for each month of the last available quarter, in the 30 towns covered by the investigation. Comparative average rents of four and five-roomed houses in these towns are also shown therein.

(iii) *Annual.*—The *Labour Report* contains index-numbers over the past four years, and the monthly and quarterly results for the last two years. The average prices for the last two years of the items of food and groceries, and average house rents for the last five are also published in this report. This publication contains information similar to, but in less detail than, that published in the Labour Report.

2. **All Items (" C " Series) Retail Price Index.**—On page 440 is published a table of weighted averages for the six capital cities combined of " C " Series index-numbers, together with index-numbers for each of the four main groups of items in the " C " Series Index for each year 1914 to 1946 and quarterly for the years 1939 and 1942 to 1946.

In the pages immediately following are published :—

(i) the " C " Series index-number for the last quarter of each year 1939 and 1941 to 1946 (page 447) and for the month of November, 1914–20 (page 448), for each capital city and for the six capital cities combined, showing separate indexes for each of the four main groups of items ; and

(ii) the " C " Series index-numbers for the years 1914, 1921, 1929, 1939 and 1941 to 1946 (page 449) for each of the 30 towns with the weighted averages for each State, the six capital cities and 30 towns, together with index-numbers for the same periods for three additional towns for which this index is tabulated.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS(a): CAPITAL CITIES.

(Base of each Group: Weighted average of Six Capital Cities, 1923–27 = 1,000.)

Period.	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP I.—FOOD AND GROCERIES.							
Dec. Qtr. 1939 ..	940	942	859	888	926	941	927
„ „ 1941 ..	969	949	920	915	982	986	954
„ „ 1942 ..	1,060	1,069	977	1,027	1,048	1,082	1,051
„ „ 1943 ..	1,015	1,037	950	985	1,045	1,058	1,015
„ „ 1944 ..	1,022	1,046	959	988	1,049	1,039	1,022
„ „ 1945 ..	1,029	1,055	963	1,001	1,051	1,062	1,030
„ „ 1946 ..	1,047	1,044	996	996	1,052	1,084	1,037
GROUP II.—HOUSING (4 AND 5 ROOMS).(c)							
Dec. Qtr. 1939 ..	1,040	960	855	891	882	930	969
„ „ 1941 ..	1,044	975	860	893	884	933	976
„ „ 1942 ..	1,042	974	862	893	885	932	976
„ „ 1943 ..	1,042	974	862	893	885	931	975
„ „ 1944 ..	1,043	973	863	892	886	933	975
„ „ 1945 ..	1,043	973	863	892	886	934	975
„ „ 1946 ..	1,043	973	863	895	886	936	976
GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES) INDEX.							
Dec. Qtr. 1939 ..	977	947	855	887	907	935	941
„ „ 1941 ..	996	957	895	904	942	963	960
„ „ 1942 ..	1,051	1,030	930	973	982	1,021	1,019
„ „ 1943 ..	1,023	1,010	914	947	980	1,006	997
„ „ 1944 ..	1,027	1,015	919	948	983	995	1,002
„ „ 1945 ..	1,032	1,021	922	957	984	1,010	1,007
„ „ 1946 ..	1,043	1,014	942	955	985	1,024	1,011
GROUP III.—CLOTHING.							
Dec. Qtr. 1939 ..	854	862	865	869	840	867	858
„ „ 1941 ..	1,179	1,186	1,186	1,182	1,169	1,184	1,182
„ „ 1942 ..	1,382	1,423	1,355	1,357	1,355	1,384	1,388
„ „ 1943 ..	1,449	1,435	1,433	1,422	1,395	1,430	1,436
„ „ 1944 ..	1,441	1,464	1,430	1,416	1,412	1,424	1,442
„ „ 1945 ..	1,459	1,445	1,446	1,433	1,423	1,447	1,448
„ „ 1946 ..	1,555	1,551	1,552	1,529	1,548	1,558	1,550
GROUP IV.—MISCELLANEOUS.							
Dec. Qtr. 1939 ..	943	983	960	1,027	957	945	967
„ „ 1941 ..	1,072	1,083	1,043	1,156	1,058	1,030	1,080
„ „ 1942 ..	1,140	1,144	1,109	1,209	1,127	1,095	1,144
„ „ 1943 ..	1,179	1,157	1,140	1,212	1,140	1,109	1,168
„ „ 1944 ..	1,169	1,158	1,134	1,213	1,139	1,099	1,163
„ „ 1945 ..	1,163	1,158	1,133	1,213	1,139	1,099	1,161
„ „ 1946 ..	1,175	1,165	1,141	1,222	1,147	1,110	1,170
GROUPS I. TO IV.—ALL ITEMS ("C" SERIES) INDEX.							
Dec. Qtr. 1939 ..	943	932	874	906	899	919	926
„ „ 1941 ..	1,048	1,028	985	1,010	1,012	1,023	1,029
„ „ 1942 ..	1,138	1,136	1,055	1,100	1,090	1,113	1,122
„ „ 1943 ..	1,143	1,128	1,068	1,099	1,100	1,117	1,123
„ „ 1944 ..	1,142	1,138	1,069	1,098	1,104	1,106	1,126
„ „ 1945 ..	1,147	1,137	1,074	1,106	1,107	1,120	1,129
„ „ 1946 ..	1,177	1,157	1,110	1,128	1,136	1,155	1,156

(a) See footnote (a) on page 443. (b) Weighted average. (c) See footnote (b) on page 443.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS(a): CAPITAL CITIES, 1914 to 1920.

(Base of each Group: Weighted Average of Six Capital Cities, 1923–27 = 1,000.)

Period.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP I.—FOOD AND GROCERIES.							
Nov. 1914 ..	638	616	614	683	746	687	641
„ 1915 ..	844	835	860	858	819	858	842
„ 1916 ..	833	791	748	835	854	807	812
„ 1917 ..	877	798	825	805	828	949	836
„ 1918 ..	877	843	882	862	816	918	861
„ 1919 ..	1,073	975	1,069	1,012	987	1,041	1,026
„ 1920 ..	1,225	1,220	1,117	1,225	1,113	1,293	1,209
GROUP II.—HOUSING (4 AND 5 ROOMS.) (c)							
Nov. 1914 ..	758	608	463	611	586	525	649
„ 1915 ..	780	611	472	574	581	571	659
„ 1916 ..	791	625	467	573	592	574	665
„ 1917 ..	797	657	492	606	602	586	685
„ 1918 ..	832	699	526	656	619	614	722
„ 1919 ..	866	744	604	707	650	746	768
„ 1920 ..	980	807	634	783	718	904	851
GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES) INDEX.							
Nov. 1914 ..	680	613	560	658	689	630	644
„ 1915 ..	825	756	722	758	734	756	777
„ 1916 ..	818	732	648	742	761	724	760
„ 1917 ..	848	748	707	734	748	820	782
„ 1918 ..	861	792	756	789	746	810	812
„ 1919 ..	1,000	893	904	904	867	936	934
„ 1920 ..	1,138	1,074	945	1,068	973	1,155	1,082
GROUP III.—CLOTHING.							
Nov. 1914 ..	755	780	657	756	698	825	754
„ 1915 ..	805	797	690	821	760	833	792
„ 1916 ..	903	870	779	919	849	940	881
„ 1917 ..	1,009	976	899	1,049	980	1,041	992
„ 1918 ..	1,102	1,103	1,025	1,066	1,135	1,200	1,097
„ 1919 ..	1,237	1,213	1,192	1,303	1,277	1,344	1,238
„ 1920 ..	1,323	1,422	1,274	1,384	1,359	1,430	1,365
GROUP IV.—MISCELLANEOUS.							
Nov. 1914 ..	766	728	728	770	780	699	749
„ 1915 ..	798	770	756	803	822	770	786
„ 1916 ..	808	784	766	832	869	780	802
„ 1917 ..	889	879	836	883	926	865	882
„ 1918 ..	988	950	931	988	1,035	945	972
„ 1919 ..	1,059	1,016	968	1,035	1,120	1,006	1,036
„ 1920 ..	1,209	1,181	1,139	1,200	1,262	1,124	1,194
GROUPS I. TO IV.—ALL ITEMS ("C" SERIES) INDEX.							
Nov. 1914 ..	712	671	611	699	707	687	687
„ 1915 ..	816	768	721	780	755	776	782
„ 1916 ..	836	773	698	798	800	783	795
„ 1917 ..	892	823	773	832	832	879	847
„ 1918 ..	938	890	848	887	885	923	905
„ 1919 ..	1,065	988	981	1,018	1,005	1,042	1,022
„ 1920 ..	1,193	1,172	1,054	1,164	1,111	1,213	1,166

(a) See footnote (a) on page 443. (b) Weighted average. See page 440 for corresponding figures for years 1921 to 1946. (c) See footnote (b) on page 443.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS: THIRTY TOWNS.

(*Base: Weighted Average of Six Capital Cities*, 1923–27 = 1,000).

State and Town.	Nov. 1914.	Nov. 1921.	Year 1929.	Year 1939.	Year 1941.	Year 1942.	Year 1943.	Year 1944.	Year 1945.	Year 1946.
NEW SOUTH WALES—										
Sydney	712	1,046	1,073	936	1,028	1,107	1,151	1,144	1,142	1,165
Newcastle	..	1,041	1,028	901	997	1,069	1,109	1,094	1,100	1,119
Broken Hill	..	975	1,018	955	1,049	1,132	1,172	1,179	1,192	1,216
Goulburn	..	1,033	1,108	916	1,005	1,087	1,125	1,118	1,114	1,134
Bathurst	..	947	979	883	974	1,050	1,091	1,088	1,091	1,116
FIVE TOWNS (*a*)	..	1,042	1,067	933	1,026	1,104	1,147	1,140	1,139	1,162
VICTORIA—										
Melbourne	671	1,003	1,017	924	1,008	1,100	1,139	1,135	1,135	1,149
Ballarat	..	992	957	874	950	1,037	1,084	1,083	1,086	1,094
Bendigo	..	1,002	969	875	963	1,054	1,096	1,101	1,099	1,107
Geelong	..	1,019	980	911	984	1,065	1,110	1,112	1,113	1,124
Warrnambool	..	1,034	960	918	998	1,078	1,126	1,129	1,139	1,153
FIVE TOWNS (*a*)	..	1,003	1,011	920	1,004	1,095	1,135	1,131	1,131	1,145
QUEENSLAND—										
Brisbane	611	923	923	870	963	1,033	1,072	1,071	1,072	1,093
Toowoomba	..	949	916	858	951	1,033	1,080	1,085	1,087	1,107
Rockhampton	..	972	904	867	959	1,032	1,073	1,074	1,079	1,096
Townsville	..	1,025*b*	939*b*	918	1,004	1,075	1,114	1,117	1,114	1,136
Bundaberg	..	994*c*	931*c*	847	938	1,015	1,057	1,057	1,054	1,074
FIVE TOWNS (*a*)	..	941	922	871	964	1,035	1,075	1,075	1,075	1,097
SOUTH AUSTRALIA—										
Adelaide	699	989	1,037	906	988	1,075	1,102	1,098	1,102	1,120
Kadina, etc.	..	998	943	810	882	962	998	995	999	1,020
Port Pirie	..	1,025	980	896	976	1,057	1,087	1,081	1,085	1,106
Mount Gambier	..	1,029	963	872	946	1,024	1,061	1,064	1,070	1,093
Peterborough	..	948	1,043	897	974	1,053	1,087	1,087	1,093	1,108
FIVE TOWNS (*a*)	..	992	1,030	902	983	1,069	1,097	1,093	1,098	1,116
WESTERN AUSTRALIA—										
Perth, etc.	707	1,008	1,026	901	993	1,061	1,104	1,105	1,107	1,127
Kalgoorlie, etc.	..	1,048	1,032	1,066	1,165	1,175	1,192	1,199	1,202	1,223
Northam	..	1,030*d*	1,022	915	1,017	1,079	1,111	1,113	1,113	1,133
Bunbury	..	1,045	978	936	1,018	1,065	1,102	1,110	1,115	1,136
Geraldton	..	1,056	1,051	965	1,055	1,114	1,165	1,176	1,170	1,187
FIVE TOWNS (*a*)	..	1,020	1,026	915	1,008	1,070	1,112	1,113	1,116	1,136
TASMANIA—										
Hobart	687	1,070	1,000	908	1,001	1,078	1,117	1,105	1,107	1,138
Launceston	..	1,067	967	888	974	1,040	1,078	1,067	1,072	1,099
Burnie	..	1,003*e*	966	879	971	1,035	1,088	1,065	1,063	1,093
Devonport	..	904*f*	948	861	951	1,012	1,058	1,040	1,045	1,079
Queenstown	..	1,031	972	903	987	1,045	1,096	1,102	1,110	1,139
FIVE TOWNS (*a*)	..	1,057	986	898	989	1,060	1,101	1,089	1,092	1,121
THIRTY TOWNS (*a*)	..	1,013	1,026	917	1,006	1,087	1,127	1,122	1,123	1,142
SIX CAPITALS (*a*)	687	1,013	1,033	920	1,008	1,091	1,131	1,126	1,126	1,145
Canberra (A.C.T.) (*g*)	..	..	..	956	1,040	1,121	1,168	1,153	1,149	1,170
Warwick (Q.) (*g*)	..	994	931	834	926	1,007	1,055	1,061	1,064	1,087
Port Augusta (S.A.) (*g*)	..	1,035	1,061	883	980	1,052	1,076	1,076	1,084	1,105

(*a*) Weighted average. (*b*) Charters Towers. (*c*) Warwick. (*d*) Midland Junction. (*e*) Zeehan. (*f*) Beaconsfield. (*g*) Not included in weighted averages above.

3. **"B" Series Retail Price Index: Food, Groceries and Rent.**—This index measures the prices of food and groceries and the rent of 4 and 5-roomed houses. It was first compiled for the year 1925, and retrospectively for several earlier years. It was designed to replace the "A" Series Index (food, groceries and rent of all houses), which was the original index compiled in 1912. The first of the two tables following is split up into the various sections of the regimen, and covers only the six capital cities,

while the second represents the whole regimen and covers the 30 Towns included in the tabulation of the "B" Series Index, with the weighted averages for the 5 towns in each State, the Six Capital Cities and the 30 Towns.

RETAIL PRICE INDEX-NUMBERS(a): CAPITAL CITIES—"B" SERIES.

(Base of each Section: Weighted Average of Six Capital Cities, 1923–27 = 1,000.)

Town.	1914.	1921.	1939.	1941.	1942.	1943.	1944.	1945.	1946.
SECTION A.—GROCERIES.									
Sydney	627	1,115	994	989	1,082	1,016	965	965	969
Melbourne	562	1,070	957	924	1,034	967	924	926	929
Brisbane	607	1,105	944	957	1,066	989	934	933	935
Adelaide	598	1,076	939	932	1,073	979	939	941	944
Perth	628	1,103	966	983	1,048	1,007	963	964	966
Hobart	604	1,087	947	950	1,048	971	925	930	934
Six Capitals (b)	599	1,093	969	958	1,061	992	946	946	950
SECTION B.—DAIRY PRODUCE.									
Sydney	656	1,080	851	863	924	947	960	958	956
Melbourne	635	1,087	885	893	943	971	970	966	965
Brisbane	588	983	793	808	871	902	932	932	930
Adelaide	705	1,018	800	798	861	888	895	895	893
Perth	735	1,152	870	878	922	976	982	983	981
Hobart	695	1,091	844	873	932	967	968	966	963
Six Capitals (b)	654	1,072	853	862	919	947	956	954	952
SECTION C.—MEAT.									
Sydney	668	960	935	1,015	1,089	1,160	1,158	1,190	1,202
Melbourne	663	1,030	968	1,007	1,142	1,242	1,279	1,307	1,288
Brisbane	610	897	822	943	942	1,018	1,026	1,032	1,079
Adelaide	784	1,095	929	969	1,074	1,138	1,151	1,178	1,188
Perth	881	1,103	958	1,070	1,102	1,199	1,239	1,251	1,248
Hobart	780	1,244	961	1,082	1,149	1,265	1,233	1,257	1,338
Six Capitals (b)	691	1,010	936	1,006	1,092	1,175	1,190	1,217	1,223
SECTIONS A, B AND C COMBINED.—FOOD AND GROCERIES.									
Sydney	646	1,062	936	962	1,040	1,042	1,025	1,035	1,039
Melbourne	610	1,063	942	943	1,042	1,055	1,049	1,057	1,052
Brisbane	603	1,014	864	911	972	975	965	966	981
Adelaide	679	1,066	897	905	1,012	1,003	993	1,002	1,006
Perth	728	1,166	938	981	1,029	1,059	1,056	1,060	1,059
Hobart	678	1,133	923	970	1,047	1,062	1,035	1,043	1,069
Six Capitals (b)	640	1,064	927	947	1,031	1,037	1,026	1,034	1,036
SECTION D.—HOUSING (4 AND 5 ROOMS).(c)									
Sydney	760	989	1,035	1,043	1,043	1,042	1,043	1,043	1,043
Melbourne	628	820	955	975	975	974	974	973	973
Brisbane	466	630	854	860	862	862	863	863	863
Adelaide	655	809	888	893	893	893	892	892	894
Perth	589	739	881	883	885	885	886	886	886
Hobart	518	881	925	933	933	931	932	933	936
Six Capitals (b)	662	862	965	976	976	975	976	975	976
ALL SECTIONS COMBINED.—FOOD, GROCERIES AND HOUSING ("B" SERIES INDEX).									
Sydney	687	1,036	972	992	1,039	1,040	1,030	1,036	1,038
Melbourne	616	977	945	953	1,014	1,021	1,017	1,022	1,019
Brisbane	554	877	858	889	927	929	923	924	932
Adelaide	671	975	891	899	963	958	951	957	960
Perth	679	982	914	941	971	989	987	990	989
Hobart	621	1,044	922	953	1,000	1,009	992	998	1,014
Six Capitals (b)	648	992	939	956	1,007	1,011	1,004	1,009	1,010

(a) See footnote (a) on page 443. (b) Weighted average. (c) See footnote (b) on page 443.

RETAIL PRICE INDEX-NUMBERS: THIRTY TOWNS—"B" SERIES.

FOOD, GROCERIES AND RENT.

(*Base: Weighted Average of Six Capital Cities*, 1923–27 = 1,000.)

State and Town.	Nov. 1914.	Nov. 1921.	1929.	1939.	1941.	1942.	1943.	1944.	1945.	1946.
NEW SOUTH WALES—										
Sydney	680	977	1,115	972	992	1,039	1,040	1,030	1,036	1,038
Newcastle	..	944	1,068	934	959	1,005	1,000	987	989	990
Broken Hill	..	825	1,078	970	991	1,052	1,044	1,055	1,073	1,073
Goulburn	..	926	1,146	942	957	1,009	1,007	999	997	996
Bathurst	..	815	987	900	910	957	953	951	958	966
FIVE TOWNS (*a*)	..	965	1,110	969	988	1,036	1,036	1,026	1,032	1,034
VICTORIA—										
Melbourne	613	895	1,036	945	953	1,014	1,021	1,017	1,022	1,019
Ballarat	..	769	914	849	841	894	908	907	912	917
Bendigo	..	780	962	851	868	920	923	923	926	928
Geelong	..	844	985	917	912	956	962	958	957	961
Warrnambool	..	855	940	940	941	984	993	995	1,008	1,020
FIVE TOWNS (*a*)	..	876	1,026	938	946	1,005	1,012	1,009	1,013	1,011
QUEENSLAND—										
Brisbane	560	840	912	858	889	927	929	923	924	932
Toowoomba	..	771	855	830	857	913	927	945	949	955
Rockhampton	..	779	877	843	863	901	904	908	917	919
Townsville	..	820*b*	975*b*	920	933	974	970	975	979	989
Bundaberg	..	794*c*	867*c*	804	835	878	888	886	886	897
FIVE TOWNS (*a*)	..	824	906	858	886	926	928	926	928	936
SOUTH AUSTRALIA—										
Adelaide	658	898	1,030	891	899	963	958	951	957	960
Kadina, etc.	..	811	891	743	738	789	784	776	779	790
Port Pirie	..	839	963	882	889	943	932	923	931	933
Mount Gambier	..	770	866	838	832	879	877	884	895	903
Peterborough	..	844	1,042	890	893	936	926	922	935	936
FIVE TOWNS (*a*)	..	885	1,020	885	892	955	950	944	949	952
WESTERN AUSTRALIA—										
Perth, etc.	689	916	1,038	914	941	971	989	987	990	989
Kalgoorlie, etc.	..	928	1,010	1,178	1,211	1,160	1,122	1,121	1,128	1,136
Northam	..	898*d*	1,072	936	980	1,005	1,001	999	1,001	1,003
Bunbury	..	907	996	979	996	1,011	1,010	1,010	1,015	1,024
Geraldton	..	942	1,090	990	1,024	1,048	1,069	1,079	1,072	1,073
FIVE TOWNS (*a*)	..	918	1,036	936	964	988	1,001	1,000	1,002	1,003
TASMANIA—										
Hobart	630	971	992	922	953	1,000	1,009	992	998	1,014
Launceston	..	858	937	887	913	948	953	936	943	956
Burnie	..	819*e*	972	898	937	973	998	958	954	969
Devonport	..	696*f*	930	865	898	928	942	920	924	939
Queenstown	..	871	920	933	947	970	1,005	1,004	1,014	1,028
FIVE TOWNS (*a*)	..	911	970	908	937	978	988	970	977	992
THIRTY TOWNS (*a*)	..	907	1,044	935	952	1,001	1,005	998	1,003	1,005
SIX CAPITALS (*a*)	644	924	1,054	939	956	1,007	1,011	1,004	1,009	1,010
Canberra (A.C.T.) (*g*)	..	..	..	1,026	1,028	1,078	1,073	1,058	1,059	1,062
Warwick (Q.) (*g*)	..	794	867	783	817	856	872	886	891	904
Port Augusta (S.A.) (*g*)	..	861	1,047	864	896	932	914	914	925	929

(*a*) Weighted average. (*b*) Charters Towers. (*c*) Warwick. (*d*) Midland Junction. (*e*) Zeehan. (*f*) Beaconsfield. (*g*) Not included in weighted averages above.

§ 8. Changes in the Regimen.

1. **General.**—Since the original compilation of retail prices by the Bureau, the regimens of the several groups and sections have undergone some modifications. These are fully described in the annual *Labour Report* No. 35 for 1945 and 1946, pp. 31–34. These changes are made from time to time with a view to improving the index-numbers as measures of price variations. They comprise chiefly the elimination or replacement of articles no longer in demand, or which experience had shown to be unsuitable media for the measurement of price variations; the alteration of units of quantity in certain cases to conform with those most in general use; the adjustment of the mass unit allotted

to certain articles to bring them into accord with present-day consumption habits ; the re-adjustment of the population and household weights applicable to the several groups and sections of the regimen in accordance with general Census results ; and improved methods of collecting and weighting average house rentals.

2. **Method of Effecting Changes.**—Changes of the nature mentioned are commonly made in price indexes without seriously impairing their continuity. In accordance with established principles of procedure in effecting such changes (see *Labour Report* No. 9, Appendix I., Part II., paragraphs 14 and 18), the general level of the index is taken as determined by the old regimen for the quarter in which the change is made, and the new regimen is used to measure variations in the price-level after that date. The linking up of the index-numbers on the old and the new basis is effected by the usual method of equating the respective weighted aggregate costs of the old and the new regimens in the six capital cities.

There are two methods of effecting this according to the nature of the change to be made, as follows :—Up to the June quarter, 1942, all such changes were made by equating the new aggregate of the section embodying the changes to the former aggregate. This course was adopted when items were added to or omitted from the regimen, and when a change was made in the standard of any item. From the September quarter, 1942, however, all changes of standard were effected mainly by an appropriate adjustment of the " mass unit " or " weight " so as to preserve the percentage weight which the item carried in the aggregate from time to time and, wherever possible, the "weight" of any item dropped from the regimen was transferred to an article of a similar nature which would serve as a more appropriate medium for the measurement of the variations in the price of the article dropped than the remaining items of the section. The " mass units " of the remaining items under the former procedure were in effect proportionately increased to carry the aggregate of the item dropped, or reduced to admit a new item added. *See* also par. 3 on pages 444 and 445.

While the foregoing involves no break of continuity in the index-numbers for the six capital cities as a whole, upon the basis of which all such changes are effected, slight alterations of the relative positions of individual towns are inevitable on account of the alteration of former standards. The effect, however, is more noticeable in the group index-numbers than in those covering a combination of groups, wherein the losses and gains tend to balance out.

3. **The Regimen under War Conditions.**—Although the effects of the war produced some variations from normal consumption in 1940 and 1941, it was not until 1942 that fundamental changes (as explained in § 2 (5) of this Chapter) began to occur. The years 1942, 1943 and 1944 produced temporary changes of a far-reaching character which, if permanent and stable, must have necessitated fundamental re-adjustments in the regimen and mass units of the index. But the resultant changes in the index would have been so extensive as virtually to create a new index which would not have been continuously comparable with the " C " Series Index either as compiled pre-war or as it may be compiled in post-war years. Consideration of the matter led to the conclusions—

(i) that it was desirable to continue the " C " Series Index substantially on its pre-war regimen in order to ensure continuity of comparison of price movements on a clearly defined basis ;

(ii) that it was impossible to reconstruct the " C " Series Index to take account of recurrent temporary departures from normal consumption.

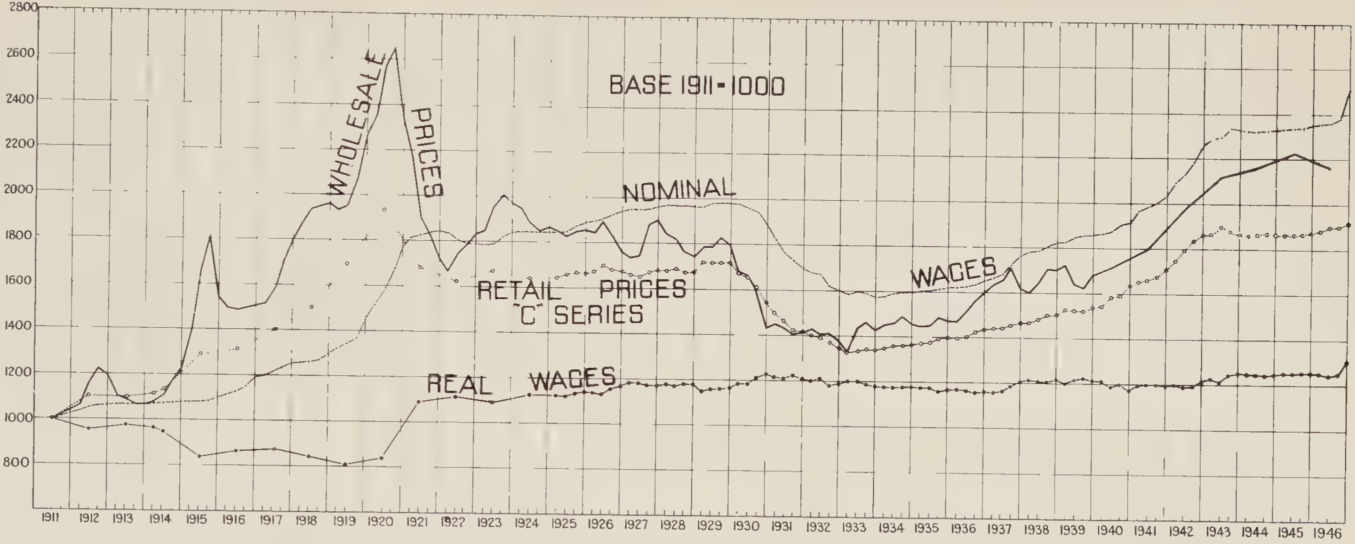
§ 9. Retail Price Indexes and Wage Variations.

Two distinct procedures are adopted by the Commonwealth Court of Conciliation and Arbitration in fixing and varying basic or living wages and are as follows :—

(i) The Court periodically *fixes* the amount of wage in the light of evidence submitted by parties appearing before it. Such evidence usually covers a wide range of facts as to economic conditions.

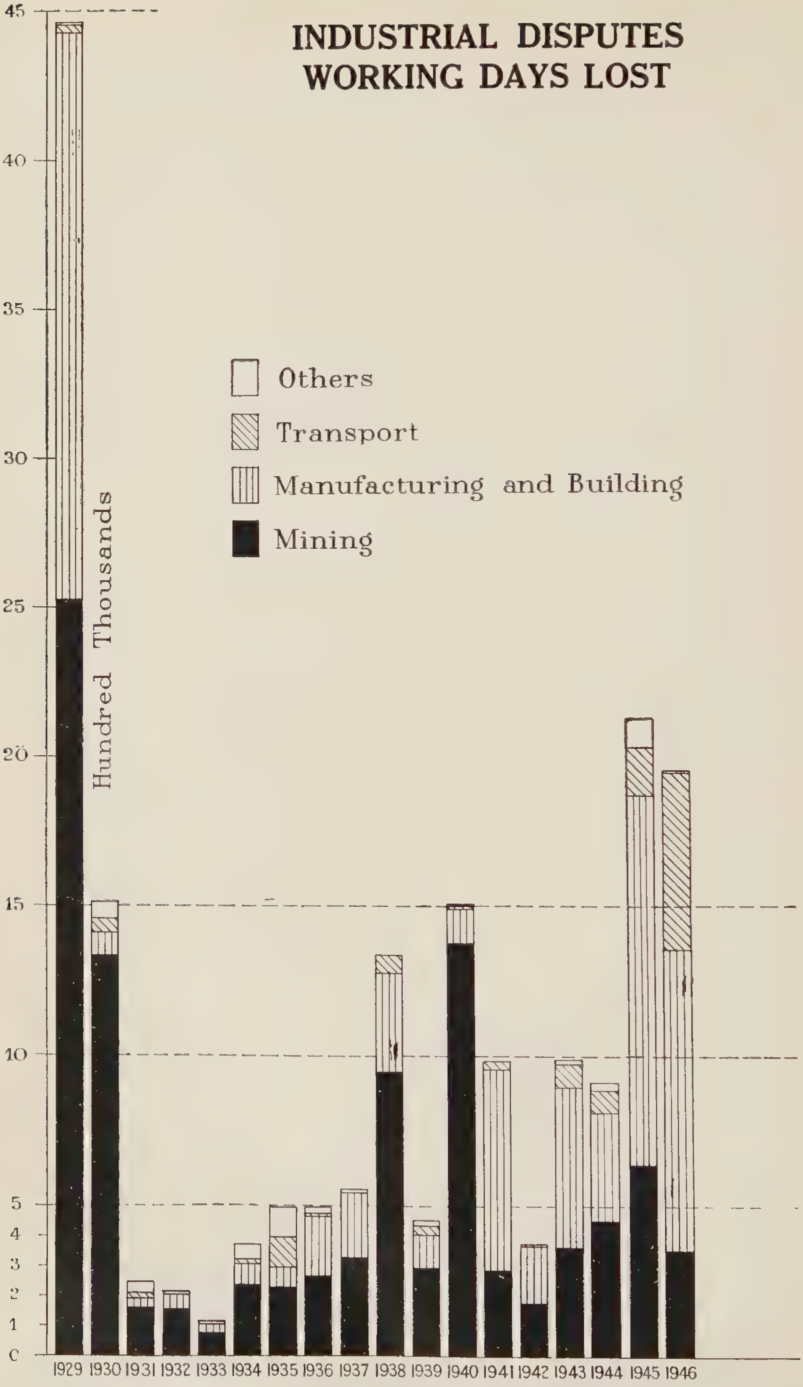
(ii) Having determined the amount of basic wage the Court further determines whether or not it shall be subject to automatic adjustment for changes in price level and, if so, by what method such *variation* shall be made. This again is decided in the light of evidence and of representations by the parties concerned.

WHOLESALE AND RETAIL PRICES, NOMINAL AND EFFECTIVE OR REAL WAGE INDEX-NUMBERS.—AUSTRALIA, 1911 TO 1946.



EXPLANATION.—The index-numbers in the graph above are for the Six Capital Cities as a whole, with the exception of those for Wholesale Prices, which are for Melbourne. They are all calculated to the common base 1911 = 1,000, the scale for which appears on the left of the graph. They are shown *quarterly* from 1912 to 1939, and thereafter the annual average in the case of the Wholesale Prices (Melbourne). The "C" Series Retail Prices (food, groceries, rent of 4 and 5 rooms, clothing and miscellaneous household expenditure) are shown *quarterly* from 1925. For the period 1911-1914 the "C" Series are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses). Nominal Wages are shown *quarterly* from 1914, and Real Wages *quarterly* from 1925. Real Wages are computed on the basis of the "C" Series.

INDUSTRIAL DISPUTES WORKING DAYS LOST



Explanation.—The scale refers to working days lost in hundred thousands. Thus, taking the year 1929, and comparing the sections with the scale, it will be seen that about 2,528,000 working days were lost in Mining, 1,901,000 in Manufacturing and Building, 30,000 in Transport, and about 3,000 in other industries. Total, 4,462,000 days.

The "C" Series Index is used by the Court to derive the "Court" series of retail price index-numbers upon which the basic or "needs" portion of the wages prescribed in awards is varied automatically for changes in price levels quarterly, half-yearly or yearly. These are commonly referred to as "cost of living adjustments" although in fact they relate only to that part of the *change in cost of living* which is due to variations in prices. The Court itself determines from time to time at public sittings the amount of the basic wage, having regard to evidence submitted in relation to other aspects of "cost of living" and other relevant considerations. In fixing the amount of the basic wage the Court does not have regard to either the regimen used in compiling the retail price index or the cost of such regimen. The regimen of the index would not be suited to such a purpose.

The considerations upon which the basic wage is fixed are set out in successive judgments of the Court and briefly summarized in Chapter III. (§ 3) of the *Labour Report*. On this matter, reference should be made to the Basic Wage Judgments of the Court, particularly those of 1934, 1937 and 1941, and to the general statement of principles set out in the judgment on the "Munition Workers' Case" of 1943. Certain State industrial tribunals use the index-numbers directly for automatic or quasi-automatic adjustments of the rates of wages determined by them as tribunals, while some State tribunals have regard to the index-numbers and other factors in considering what "cost of living" variations they should make in rates of wages.

The use of indexes by industrial authorities for purposes of adjusting rates of wages for changes in price level is a practice of long standing, dating in the case of the Commonwealth Court of Conciliation and Arbitration, for example, back to the year 1913. The tribunals form their own judgment as to relevance of the indexes to their purposes, and periodically hear the representatives of employers and employees on the issues involved, including questions as to whether the index is satisfactory for the purposes to which it is applied by the tribunal. In such proceedings the Statistician or his officers are called at times as witnesses on questions of fact and technical matters relating to the indexes.

The automatic adjustments in wages prescribed in awards of the Court on the basis of retail price index-numbers are sometimes referred to as "cost of living" adjustments and the index is popularly referred to as a "cost of living index". This at times creates misconceptions as to the nature of the retail price index since the term "cost of living" connotes not only change in cost of living due to changes in prices, but also changes in cost of living due to changes in standard of living. Beyond that, use of the term "cost of living" index sometimes creates the erroneous impression that the retail price index purports to embrace all that should be included in a desirable standard of living. As pointed out in the opening sections of this chapter, the "C" Series Index is a retail price index of specific meaning.

Reference should be made to *Labour Report* No. 36 for the actual Automatic Adjustment Scale used for the adjustment of the "needs" portion of the Commonwealth basic wage.

B.—WHOLESALE PRICES AND PRICE INDEXES.

§ 1. Melbourne Wholesale Price Index.

1. **General.**—The data on which this section is based relate almost entirely to wholesale prices in Melbourne.

The index of Melbourne wholesale prices was first computed in 1912, and has been continued on the same lines since that year. The items included comprise chiefly basic materials which in the form of raw material or food, or as a source of power enter into production for home consumption. The purpose of the index, therefore, is to measure the changes in the prices of these particular materials rather than the changes in prices generally. As Australia does not, to any extent, manufacture from imported raw materials commodities for export, the local consumption appears to give the most appropriate weighting.

2. **Index-Numbers.**—Index-numbers for each group of commodities as well as for all groups combined are shown in the following table :—

INDEX-NUMBERS : MELBOURNE WHOLESALE PRICES, 1861 TO 1946.

(*Base of each Group : Year* 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials.	VIII. Chemicals.	All Groups.
1861.. ..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871.. ..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881.. ..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891.. ..	895	847	1,024	995	1,032	888	780	1,194	945
1901.. ..	1,061	774	928	1,029	1,048	1,345	841	917	974
1911.. ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1912.. ..	1,021	991	1,370	1,206	1,052	1,357	1,057	978	1,170
1913.. ..	1,046	1,070	1,097	1,054	1,024	1,252	1,128	995	1,088
1914.. ..	1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,253	1,149
1915.. ..	1,284	1,017	2,162	1,530	1,133	2,435	1,275	1,528	1,604
1916.. ..	1,695	1,423	1,208	1,485	1,322	2,515	1,491	1,760	1,504
1917.. ..	2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	1,662
1918.. ..	2,416	2,360	1,444	1,454	1,422	2,385	2,686	3,225	1,934
1919.. ..	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	2,055
1920.. ..	2,298	2,624	2,439	2,209	1,918	3,279	3,226	2,825	2,480
1921.. ..	2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	1,903
1922.. ..	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,758
1923.. ..	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	1,944
1924.. ..	1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	1,885
1925.. ..	1,852	1,967	1,797	1,636	1,723	2,212	1,711	1,790	1,844
1926.. ..	1,938	1,582	2,001	1,784	1,731	1,931	1,665	1,816	1,832
1927.. ..	1,962	1,650	1,826	1,823	1,724	2,111	1,624	1,866	1,817
1928.. ..	1,912	1,781	1,726	1,751	1,707	2,015	1,744	1,923	1,792
1929.. ..	1,912	1,556	1,792	1,853	1,690	2,246	1,754	1,942	1,803
1930.. ..	1,866	1,127	1,484	1,627	1,666	2,025	1,875	1,982	1,596
1931.. ..	1,826	1,039	1,121	1,399	1,794	1,508	2,025	2,166	1,428
1932.. ..	1,736	1,000	1,230	1,303	1,767	1,348	2,043	2,127	1,411
1933.. ..	1,713	1,118	1,175	1,105	1,714	1,487	2,061	2,106	1,409
1934.. ..	1,660	1,261	1,288	1,274	1,735	1,540	2,015	2,018	1,471
1935.. ..	1,602	1,217	1,344	1,325	1,729	1,508	1,964	1,996	1,469
1936.. ..	1,566	1,331	1,480	1,351	1,731	1,684	1,969	1,997	1,543
1937.. ..	1,772	1,406	1,605	1,451	1,750	1,678	2,430	2,006	1,656
1938.. ..	1,746	1,051	1,789	1,549	1,747	1,871	3,238	2,059	1,662
1939.. ..	1,758	1,101	1,820	1,557	1,752	1,710	2,220	2,075	1,665
1940.. ..	1,854	1,362	1,568	1,567	1,784	1,882	2,890	2,298	1,713
1941.. ..	1,960	1,402	1,721	1,554	1,884	1,776	3,138	2,527	1,796
1942.. ..	2,146	1,507	1,900	1,665	1,938	2,312	3,409	2,437	1,977
1943.. ..	2,272	1,945	1,964	1,716	1,939	2,366	3,764	2,442	2,117
1944.. ..	2,278	1,967	2,052	1,721	1,949	2,470	3,768	2,442	2,159
1945.. ..	2,270	1,960	2,259	1,726	1,967	2,560	3,770	2,527	2,228
1946.. ..	2,262	2,062	1,950	1,722	1,977	2,589	3,772	2,614	2,163

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

§ 2. Basic Materials and Foodstuffs.

1. **General.**—As mentioned above, the Melbourne Wholesale Price Index was first computed in 1912. Neither the component items nor the weighting have been varied. Consequently the index is a measure of changes in wholesale price levels based on usages which have altered substantially since the period on which the weighting was determined. As such it is useful as an indication of long-term trends over the past eighty-five years which it covers, on the assumption that the relative importance of component items remained constant. But it no longer serves as a measure of price variations from month to month or from year to year of commodities weighted in accordance with present day

consumption. Reference to a description of the index published in the annual *Labour Report* will indicate that animal fodders preponderate in the "Agricultural Produce" group, while "Building Materials" include little besides imported timber. In other groups, some principal items have increased in consumption while others have decreased. It was resolved, therefore, at the Conference of Statisticians at Brisbane in 1930 that the time had come to revise and extend the items included in order to bring the index into line with changed conditions. An investigation to that end was commenced, and in the course of the past few years, many new price-series have been collected on a monthly basis back to January, 1928. Some of these have been incorporated in a new index of the prices of basic materials and foodstuffs, index-numbers of which are regularly published in the *Monthly Review of Business Statistics* and other publications of the Bureau. The price quotations have in the main been obtained directly from manufacturers and merchants and, with a few important exceptions, from Melbourne sources. Apart from home-produced building materials, coal and one or two minor commodities, however, the price movements may be taken as representative of fluctuations in wholesale prices of basic materials in most Australian markets. The weighting system adopted is based on average annual consumption during the years 1928–29 to 1934–35 inclusive. The original index is being continued for the present on the old lines, as set out in § 1 on page 455.

2. **Index-Numbers.**—Index-numbers for each group of commodities and for all groups combined for this new index of wholesale prices of basic materials and foodstuffs are given in the following table.

WHOLESALE PRICE INDEX-NUMBERS: BASIC MATERIALS AND FOODSTUFFS, 1928–29 TO 1946–47.

(*Base of each Group:* Average 3 years ended June, 1939 = 1,000).

Period.	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Foodstuffs and Tobacco.	Goods principally Imported.	Goods principally Home Produced.	All Groups.
1928–29 ..	1,269	1,064	1,288	1,214	1,148	948	1,070	911	1,183	1,103
1929–30 ..	1,259	1,115	991	1,157	866	940	1,099	940	1,179	1,108
1930–31 ..	1,164	1,173	797	1,172	729	959	909	1,001	985	991
1931–32 ..	1,081	1,134	765	1,195	738	951	857	996	922	946
1932–33 ..	1,044	1,087	755	1,185	695	948	797	971	866	899
1933–34 ..	1,025	845	1,020	1,113	801	939	843	890	893	895
1934–35 ..	972	896	784	1,020	774	930	873	920	886	898
1935–36 ..	920	952	997	991	879	930	917	945	918	926
1936–37 ..	962	984	1,185	988	1,106	989	974	991	980	984
1937–38 ..	1,013	1,012	1,000	1.001	969	1,041	997	1,018	1,000	1,005
1938–39 ..	1,025	1,004	815	1,011	925	970	1,029	991	1,020	1,011
1939–40 ..	1,051	1,152	1,038	1,068	1,163	1,084	1,012	1,106	1,025	1.047
1940–41 ..	1,074	1,374	1.105	1,236	1,256	1,284	1,069	1,325	1,060	1,140
1941–42 ..	1,173	1,509	1,184	1,372	1,350	1,352	1,169	1,525	1.123	1,242
1942–43 ..	1,288	1,667	1,471	1,422	1,379	1,628	1,279	1,760	1,212	1.373
1943–44 ..	1,310	1,695	1,501	1,432	1,398	1,743	1,287	1,824	1,217	1,396
1944–45 ..	1,307	1.676	1.518	1,428	1,398	1,747	1,308	1,819	1,232	1.405
1945–46 ..	1,302	1,561	1.518	1,416	1,398	1,766	1,348	1,782	1,257	1,412
1946–47 ..	1,318	1,453	1,913	1,402	1,313	1,802	1,380	1,768	1,288	1,429
1943–44—										
July ..	1,310	1,694	1,569	1,433	1,398	1,741	1,305	1,824	1,233	1,407
August ..	1,310	1,694	1,541	1,433	1,398	1,741	1,291	1,823	1,222	1,398
September ..	1,310	1,694	1,502	1,433	1,398	1,741	1,297	1,828	1,224	1,402
October ..	1,310	1,694	1,507	1,433	1,398	1,741	1,286	1,826	1,216	1.396
November ..	1,310	1,694	1,436	1,433	1,398	1,741	1,279	1,829	1,206	1,389
December ..	1,310	1,694	1,499	1,433	1,398	1,743	1,275	1,821	1,209	1,389
January ..	1,310	1,696	1,490	1,433	1,398	1,743	1,279	1,828	1,210	1,392
February ..	1,310	1,696	1,490	1,433	1,398	1,743	1,269	1,815	1,208	1,386
March ..	1,310	1,696	1,490	1,430	1,398	1,746	1,271	1,818	1.208	1,387
April ..	1,310	1,696	1,490	1,430	1,398	1,746	1,289	1,832	1,215	1,397
May ..	1,310	1,696	1,490	1,430	1,398	1,746	1,291	1,818	1,223	1,398
June ..	1,308	1,696	1,507	1,430	1,398	1,746	1,307	1,820	1,235	1,407

WHOLESALE PRICE INDEX-NUMBERS: BASIC MATERIALS AND FOODSTUFFS, 1928–29 TO 1946–47—*continued.*

Period.	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Foodstuffs and Tobacco.	Goods principally Imported.	Goods principally Home Produced.	All Groups.
1944–45—										
July ..	1,308	1,696	1,512	1,430	1,398	1,747	1,312	1,819	1,239	1,410
August ..	1,308	1,696	1,542	1,429	1,398	1,747	1,306	1,817	1,237	1,408
September ..	1,308	1,696	1,525	1,430	1,398	1,747	1,291	1,814	1,225	1,399
October ..	1,308	1,696	1,523	1,430	1,398	1,747	1,288	1,821	1,221	1,397
November ..	1,310	1,696	1,515	1,430	1,398	1,747	1,289	1,831	1,217	1,398
December ..	1,306	1,696	1,515	1,430	1,398	1,747	1,290	1,834	1,216	1,398
January ..	1,306	1,678	1,516	1,430	1,398	1,746	1,291	1,822	1,217	1,396
February ..	1,306	1,678	1,516	1,430	1,398	1,748	1,304	1,830	1,225	1,404
March ..	1,306	1,678	1,511	1,430	1,398	1,748	1,314	1,824	1,235	1,408
April ..	1,306	1,678	1,511	1,430	1,398	1,748	1,333	1,835	1,245	1,419
May ..	1,306	1,609	1,525	1,429	1,398	1,748	1,331	1,795	1,249	1,410
June ..	1,306	1,609	1,510	1,406	1,398	1,748	1,346	1,790	1,261	1,417
1945–46—										
July ..	1,305	1,609	1,502	1,410	1,398	1,758	1,347	1,793	1,250	1,417
August ..	1,303	1,609	1,508	1,410	1,398	1,758	1,349	1,797	1,259	1,418
September ..	1,303	1,566	1,508	1,410	1,398	1,758	1,353	1,791	1,257	1,415
October ..	1,303	1,566	1,489	1,417	1,398	1,758	1,348	1,802	1,249	1,411
November ..	1,303	1,566	1,496	1,417	1,398	1,758	1,332	1,778	1,246	1,404
December ..	1,303	1,566	1,507	1,417	1,398	1,758	1,328	1,778	1,244	1,402
January ..	1,302	1,566	1,511	1,417	1,398	1,762	1,331	1,783	1,244	1,403
February ..	1,302	1,566	1,515	1,417	1,398	1,769	1,328	1,768	1,249	1,403
March ..	1,300	1,566	1,515	1,418	1,398	1,769	1,348	1,786	1,257	1,413
April ..	1,300	1,519	1,540	1,418	1,398	1,783	1,370	1,773	1,274	1,420
May ..	1,300	1,519	1,579	1,418	1,398	1,783	1,370	1,774	1,275	1,421
June ..	1,300	1,519	1,544	1,418	1,398	1,783	1,367	1,766	1,275	1,419
1946–47—										
July ..	1,300	1,519	1,523	1,418	1,398	1,783	1,356	1,766	1,265	1,413
August ..	1,300	1,462	1,530	1,418	1,398	1,783	1,343	1,745	1,252	1,398
September ..	1,300	1,462	1,803	1,418	1,398	1,783	1,340	1,743	1,262	1,404
October ..	1,300	1,459	1,874	1,417	1,398	1,783	1,348	1,757	1,264	1,409
November ..	1,300	1,459	1,954	1,390	1,296	1,787	1,379	1,787	1,275	1,426
December ..	1,300	1,418	1,945	1,390	1,284	1,788	1,376	1,755	1,278	1,418
January ..	1,301	1,442	1,973	1,391	1,284	1,795	1,371	1,750	1,282	1,420
February ..	1,340	1,444	2,022	1,391	1,284	1,796	1,375	1,749	1,296	1,430
March ..	1,340	1,440	2,026	1,391	1,300	1,803	1,393	1,745	1,314	1,440
April ..	1,340	1,440	2,065	1,391	1,312	1,841	1,418	1,797	1,317	1,459
May ..	1,350	1,447	2,101	1,391	1,229	1,841	1,424	1,804	1,321	1,463
June ..	1,350	1,448	2,145	1,412	1,172	1,843	1,436	1,818	1,327	1,470

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

C. CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

1. **General.**—Immediately after the outbreak of war the Commonwealth Government undertook control of prices and issued proclamations fixing as maximum prices of certain specified goods those prevailing on 31st August, 1939. These initial proclamations were issued from day to day by the Minister for Trade and Customs to peg prices of commodities which had risen or seemed likely to rise. These were emergency measures to hold prices in check pending establishment of machinery for price control.

At a Premiers' Conference held in Canberra on 9th September, 1939, agreement was reached as to the basis for co-operation between the Commonwealth and State Governments in administering price control, and on 28th September the National Security

(Prices) Regulations were proclaimed by the Commonwealth Government under the authority of the National Security Act. The Regulations established the basic principles of price control and provided for the appointment of a Commonwealth Prices Commissioner, conferring upon him extensive powers to control the prices of goods declared for that purpose by the Minister for Trade and Customs.

The National Security Act expired on 31st December, 1946, but control over prices was continued under the Defence (Transitional Provisions) Act 1946 which provided for the continuation of the Prices Regulations for a further twelve months from 1st January, 1947. In order to permit of continuation of the Prices Regulations in 1948, a further Transitional Provisions Act was passed in December, 1947. The Commonwealth Government decided to hold a referendum seeking authority for permanent powers over rents and prices (including charges) on behalf of the Commonwealth Parliament. The vote which was taken on 29th May, 1948 resulted in the rejection of the Government's proposals and in consequence arrangements were made with the State Governments to take over from the Commonwealth control of prices and land sales on 20th September, 1948 and rents on 16th August, 1948.

2. **State and Commonwealth Administration.**—At the present time (July, 1948) price control is administered jointly by the Commonwealth and the States. The central office is located in Canberra and is a Commonwealth administration, being a branch of the Department of Trade and Customs. In September, 1939, a Deputy Prices Commissioner was appointed in each State by the Commonwealth on the nomination of the State Government. Deputy Commissioners administer the Regulations under the supervision of the Commonwealth Prices Commissioner who makes prices orders under the Regulations. Close co-operation is maintained with State instrumentalities which dealt with prices before the war, and with State Government Departments, such as Agriculture and Forestry, in relation to primary products.

3. **Initial Phase of Control : Automatic Adjustment of Prices to Increases in Costs.**—In order to avoid delays in the distribution of goods, general principles were adopted late in September, 1939, providing for the automatic adjustment of prices to increases in costs.

These principles were set out in Prices Regulation Order No. 2, which was amended from time to time, and finally consolidated in Prices Regulation Order No. 100. Selling prices were to be calculated by traders themselves on principles laid down in the Order, subject to official check. The basis of such prices was the cost of the goods being sold, plus a gross profit margin. This cost was defined in the Order as the actual into-store cost of goods being sold or, in certain circumstances, as the average cost of all goods held in stock at a given date. Replacement costs were never allowed as a basis for prices. Traders were in general allowed to add the percentage margin of profit which they had added to costs on 31st August, 1939. The Prices Commissioner could increase margins where they were shown to be inadequate, or reduce them where they were deemed to be too high.

Many commodities were excluded from the operation of the general Orders, and for these specific prices were fixed. Generally, such prices were calculated on the same principles as set out in Orders No. 2 and 100, but in special cases formulae were prescribed for the absorption into prices of increases in specified costs.

4. **Change in Methods of Price Control : Pegging Profit Margins.**—An important change in the methods of price control was introduced in April, 1942, by the issue of Prices Regulation Order No. 666 which limited the trader's profit margin to the actual money margin obtaining on 15th April, 1942. From that date onwards the trader was allowed to increase his prices only by the actual amount of increased cost. Increases in money margins of profit were permitted only with special approval. This new principle was adopted because of the inflationary effects of increasing costs, increasing turnover and percentage profit margins on pre-war basis.

At this time also Australia was entering on a period of total war demanding all-round sacrifices, and the new measure of price control was introduced shortly after the pegging of interest, rent and wages. Following the entry of Japan into the war in December, 1941, costs of many goods imported into Australia rose substantially as did costs of certain locally produced goods because of the transfer of a very large proportion of efficient labour from productive industry to war services. The retail price index-number rose by 9.5 per cent. in the first twelve months of the Pacific war (i.e. during 1942) compared with 5.4 per cent. in the previous year and 4.6 per cent. in the first twelve months of war.

5. **Comments on Early Phases of Price Control.**—The method of adjusting prices automatically to cover increasing costs gave flexibility and speed to the administration of price control when these qualities were highly important under the rapidly changing conditions of an economy transferring to a war footing under great strain. But it had weaknesses.

Firstly, rising costs and prices were disturbing to a community settling down to a total war effort. The continued rise of prices and uncertainty as to their future course created a feeling that profiteering was occurring and fear that inflation would occur. This was damaging to morale. Moreover, since costs could usually be covered by rises in price, there was no direct incentive for business men to increase efficiency to offset increasing costs. The level of wages had to be continually adjusted to the changing level of prices and public finances were continually disturbed by the changing levels of costs and prices.

6. **Price Stabilization.**—The next phase of price control was designed to secure price stability and was based partly on the Canadian Plan for an over-all ceiling on prices of goods and services. On 12th April, 1943, Prices Regulation Order No. 1,015 fixed, as ceiling prices, the prices actually being charged by individual traders on that date. There were certain exceptions, mainly in respect of perishable primary products. Special ceiling prices, to cover seasonal fluctuations, had already been arranged for most of these commodities.

The ceiling applied not only to retail prices but to all prices, at every stage of production, manufacture and distribution. Every trader's selling prices were fixed as at those prevailing on the ceiling date, and consequently the prices he had to pay for his materials. Rents and interest rates were fixed and, in general, wage rates were pegged (except for "cost of living" adjustments) in February, 1942.

7. **Rising Costs.**—The price ceiling could not, however, eliminate all rising costs. A substantial proportion of materials is imported and prices paid overseas for imports cannot be controlled. Materials produced in Australia may have to be produced from less accessible or more restricted sources so that their real cost of production rises. Again, in some cases, war-time stresses made it imperative to correct anomalies in the income structure with the result that various sections of primary producers and wage-earners received increased incomes which represented increased costs. These cost increases had to be met in some way which would not involve piercing the price ceiling.

8. **Price Changes within the Price Stabilization Policy.**—The price ceiling was not, as the expression implies, an indication of the Government's determination to peg rigidly every individual price at its level on a certain date. It was rather evidence of the Government's intention not to allow the general price level, which is one of the most important indications of the community's welfare, to be subject to extreme variations of costs during war-time. Over the major part of the economic field the cost structure itself had been stabilized but where it had not been so stabilized special measures were taken. Generally the price level was divorced from the cost structure. Government policy provided that, in future, necessary relief from increased costs could be met either by price adjustment or payment of price stabilization subsidy.

In some cases increases in prices were permitted. Sales to Government Departments were normally at a price high enough to cover costs of production. Where a manufacturer or trader, later in the chain of production and distribution, could absorb higher costs, the prices charged by the suppliers of his materials were increased in some cases. Where one trader, producing in competition with others, had a ceiling price lower than that of his competitors, he was permitted, provided circumstances justified such a course, to raise his price towards the general level, and thus cover some of the increased costs. Such adjustments were arranged as a rule in such a way as to avoid a breach of the price stabilization policy, and to leave the general price level, as it affected consumers, practically unchanged.

Moreover, within the price ceiling, each trader was required to reduce his prices in accordance with Prices Regulations Orders 666 and 667 whenever a downward movement in his costs occurred.

9. **Treatment of Costs and Subsidies.**—Although the Price Stabilization Plan provided for certain increases in prices, price rises up to the end of 1946 were the exception rather than the rule. When increased costs could not be absorbed within the process of production or distribution, they were met generally at the source by payment of subsidies and thus were prevented from disturbing the whole price structure.

Any trader who was in need of relief by reason of increased costs would submit his case to the Prices Branch. If, on investigation, production was regarded as essential, and relief necessary to avoid piercing the ceiling, the case would be referred to the Price Stabilization Committee. This Committee was composed of the Prices Commissioner, the Secretary, Department of the Treasury, and the Director-General, Department of War Organization of Industry (later Department of Post-war Reconstruction). The Committee's primary concern was to determine whether all or part of the increased costs could be offset by increased economies in production or absorbed by the trader. When the Committee was satisfied that relief was required and that a price increase would be inconsistent with the Government's policy of price stabilization, it recommended to the Minister for Trade and Customs that a subsidy should be paid. This recommendation, if approved by the Minister, was subject to final confirmation by the Treasurer.

The payment of subsidies in respect of imports was an important feature of the plan. Importers received full protection against increasing oversea prices over which the Prices Commissioner had no control. Importers could ascertain before placing orders abroad whether their proposed imports would be regarded as essential. Subsidies were paid in full immediately on production of documents showing that the goods had arrived and that the landed costs were higher than the costs which were the basis of existing ceilings.

The Commonwealth Prices Commissioner had ample powers to correct any abuses that might arise under the subsidy scheme, and this was an indispensable part of the price ceiling plan.

10. **Maximum Prices.**—So long as the ceiling consisted of prices determined for each trader by the price charged on 12th April, 1943, ample room existed for uncertainty among purchasers as to what was the legal ceiling price, and even for evasion.

To meet this difficulty the Prices Branch extended its policy of fixing specific maximum prices which no trader could exceed, whatever may have been his price on 12th April, 1943. Under these Orders the consumer knew the highest price he could be charged and the Administration was in a stronger position to police its Prices Regulations Orders. Some important Orders in this category were made. Specific maximum prices were fixed for hundreds of grocery lines, for many fruits and vegetables throughout Australia, for woollen piece-goods, for cotton yarns, for woollen goods, for standard cloths and for meat.

A further development in this direction was the widening of the group of commodities in respect of which traders were required either to display a list of maximum prices or to mark the goods themselves with actual selling prices. Groceries, some fruit and vegetables, liquor and furniture were included in this group.

11. **Governmental Action to Adjust Increases in the Cost of Living.**—At the time the price ceiling was introduced the most recent measurement of retail prices was for March quarter, 1943 and represented prices about the middle of February or in the

case of food and groceries the average of the months January to March inclusive. Between these dates and 12th April, 1943, when the ceiling was imposed there was a lapse of time, and, as was expected, the retail price index for June quarter was appreciably higher than that for March quarter. This was due to various causes. Seasonal rises had taken place in the prices of potatoes, meat and eggs. The new supply of winter clothing came on to the retail market in June quarter and many important lines had shown substantial increases in price. There were also some adjustments that had to be made to retail prices to absorb increases in wholesale costs that were still outstanding when the ceiling was introduced. Through the operation of the automatic " cost of living " adjustment clauses of the industrial awards, this rise in the retail price index for June quarter necessitated an increase in the basic wage involving increased costs for all employing labour.

The Government was aware at the time it introduced the price stabilization policy that this situation would probably arise, and as soon as it was advised of the nature and extent of the rise it took the necessary steps to absorb the rise in costs, firstly by undertaking to refund to employers amounts paid as basic wage increases and secondly by reducing prices in such a way as to offset the price increases that had occurred.

These measures were announced on 21st July, 1943. The price of tea was reduced by 1s. 2d. per lb. to its pre-war level and the standard retail maximum price for potatoes was fixed at 5 lb. for 6d. (capital city basis). In the former case importers, and in the latter case growers, received a subsidy. At the same time, also, sales tax on clothing and textiles was reduced from 12½ to 7½ per cent. to take effect as existing stocks were cleared.

The range of commodities chosen for price reduction was small but all were universally consumed so that it was certain that the benefit of the reduction would be spread throughout the community. Prices of tea had risen by 50 per cent. and of clothing by an average of 75 per cent. since the outbreak of the war and seasonal fluctuations in potato prices had seriously disturbed the retail price level.

By December quarter 1943, the retail price index-number was again close to the pre-ceiling level of March quarter 1943.

12. **Recent Developments.**—Experience has shown that the further the ceiling date (12th April, 1943) receded the more difficult became the task of ascertaining prices on that particular date. The change-over from war-time controls to a peace-time economy raised many complex problems in respect of pricing and these new problems demanded a new approach. The rigidity of price ceilings had to give way to a more elastic control to permit of the expeditious pricing of the thousands of new or restored lines, and in certain instances the Commissioner extended to manufacturers the privilege of automatically fixing their own prices having regard to a previously determined basis.

The lifting of many economic war-time controls such as the Manpower Regulations, and those regulations governing the production of commodities and the modification of others, such as Wage-pegging Regulations, were major shocks to the economic structure.

Late in 1946, important steps were taken by the Commonwealth Government to modify the operation of the Price Stabilization Plan. The Government desired to keep expenditure on price stabilization subsidies within reasonable limits and adopted the policy of critically examining proposed new payments and tapering off existing commitments. Where necessary, relief from increased costs would be extended by price increase more frequently rather than by payment of subsidy.

General increases in the " real " basic wage resulting from the " Interim Basic Wage " judgment of the Commonwealth Arbitration Court of 13th December, 1946 (operating from the first pay-day in December, 1946) were partly offset by reductions or elimination of Sales Tax, and traders were required to absorb, in part, or wholly, the increased costs. In other cases, price increases were granted.

In February, 1947, the wages subsidies payable in respect of the Clothing Trades' Award and the National Security (Female Minimum Rates) Regulations were removed. In addition, payment of subsidy to cover basic wage adjustments was cancelled and steps were taken either to adjust prices or to require traders to absorb the increased costs.

On 30th May, 1947, a drastic change took place in connexion with import subsidies. The fundamental concept of *essentiality* gave way to that of *eligibility* for subsidy. The Government adopted an exclusive list of some 20 items which would be eligible for payment of import subsidies. The list of eligible items was practically restricted to textiles and clothing and several smaller items. Subsequently the list was gradually reduced until import subsidy on the last remaining item (viz. imported textiles and yarns) was discontinued as from 31st July, 1948.

The following additional adjustments have been made recently in regard to certain important commodities :—

Potatoes.—Retail prices were increased from 5 lb. to 4 lb. for 6d. from July, 1947.

Tea.—Wholesale prices were increased by 6d. per lb. from 1st March, 1947, but the saving in subsidy on this account was more than offset by the increased price of tea in India and Ceylon consequent upon the termination of the British Government contract and the resumption of auction sales. The increase in retail price, however, was also limited to 6d. per lb.

Clothing and Household Drapery.—Sales tax on clothing and household drapery was completely removed from 14th November, 1946.

The Prices Commissioner has constantly watched the supply position of commodities and services in relation to the demand. When the danger of "black marketing" in any commodity or service was eliminated by supply overtaking demand and the interests of the consuming public were adequately safe-guarded, steps were taken to remove these items from price control. In accordance with this policy, control was removed from such commodities as hay, chaff, straw and oats and growers' prices of fruit and vegetables.

13. **Expenditure on Price Stabilization Subsidies.**—The following is a comparison of the expenditure on Price Stabilization Subsidies for the years 1943-44 to 1946-47 inclusive. In addition to this expenditure, the Government paid subsidies to the dairy industry and on superphosphates and these payments also had a stabilizing influence on prices.

PRICES STABILIZATION SUBSIDIES—EXPENDITURE : AUSTRALIA.

Item.	1943-44.	1944-45.	1945-46.	1946-47.
	£	£	£	£
Potatoes	1,725,446	2,433,492	2,829,648	3,012,170
Tea	2,460,612	2,188,292	2,356,176	4,413,702
Milk	318,976	1,785,946	2,517,247	2,252,649
Recoupment of Basic Wage ..	1,101,603	801,891	555,372	2,307,435
Imports (other than Tea) ..	967,041	2,436,683	3,006,464	3,690,859
Coal	101,268	182,767	456,657	958,949
Firewood	199,679	305,221	201,204	314,852
Rubber	..	98,783	141,200	333,575
Raw Wool	..	..	..	3,416,876
Tobacco	..	..	250,000	617,704
Other Expenditure	131,035	576,349	669,766	1,322,137
Total	7,005,660	10,809,424	12,983,734	22,640,908

14. **Expenditure on Commonwealth Prices Branch.**—The table following shows the expenditure on the Commonwealth Prices Branch during each of the years 1939–40 to 1947–48 inclusive. The expenditure over the whole period in respect of each State Office and Head Office was as follows :—New South Wales, £973,689 ; Victoria, £609,345 ; Queensland, £439,995 ; South Australia, £260,362 ; Western Australia, £316,466 ; Tasmania, £137,579 ; and Head Office, £736,531.

COMMONWEALTH PRICES BRANCH : EXPENDITURE, AUSTRALIA.

Year.	Salaries.	General Expenses.	Total.
	£	£	£
1939–40	19,086	7,622	26,708
1940–41	35,833	9,543	45,376
1941–42	70,047	14,354	84,401
1942–43	150,112	23,570	173,682
1943–44	285,265	49,653	334,918
1944–45	420,295	70,499	490,794
1945–46	486,256	73,489	559,745
1946–47	648,118	113,963	762,081
1947–48	844,798	151,464	996,262
Total	2,959,810	514,157	3,473,967

15. **Retail Price Indexes.**—The movement in the retail price index-numbers since the September quarter 1939, is shown below :—

RETAIL PRICE INDEX-NUMBERS. 1939–1947.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base of each Group : September Quarter, 1939 = 1,000.)

Period.	Food.	Rent.	Clothing.	Miscellaneous.	All Items "C" Series.
September quarter 1939 ..	1000	1000	1000	1000	1000
,, ,, 1940 ..	1019	1006	1146	1049	1046
,, ,, 1941 ..	1017	1009	1349	1117	1102
,, ,, 1942 ..	1147	1009	1605	1155	1207
March ,, 1943 ..	1130	1008	1685	1196	1226
June ,, ,, ..	1150	1008	1754	1205	1248
September ,, ,, ..	1126	1008	1734	1212	1237
December ,, ,, ..	1103	1008	1718	1215	1226
September ,, 1944 ..	1126	1008	1714	1211	1233
September ,, 1945 ..	1130	1008	1693	1208	1229
September ,, 1946 ..	1118	1009	1819	1214	1251
September ,, 1947 ..	1200	1010	1873	1262	1301

D.—WAGES.

§ 1. Operations under Wages Board and Industrial Arbitration Acts.

1. **General.**—Particulars regarding operations under the Commonwealth and State Acts for the regulation of wages, hours and conditions of labour were first compiled for the year 1913, and reviews to the end of each annual period appear in the *Labour Reports* and in the *Quarterly Summaries of Australian Statistics.*

2. **Awards, Determinations and Industrial Agreements.**—The following table gives a summary for each of the years 1939 and 1943 to 1946 :—

AWARDS AND DETERMINATIONS MADE AND INDUSTRIAL AGREEMENTS FILED.

State, etc.	1939.		1943.		1944.		1945.		1946.	
	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.
New South Wales	64	17	24	11	36	10	40	19	66	18
Victoria	173	..	129	..	110	..	69	..	116	..
Queensland	50	25	17	35	14	29	58	33	23	47
South Australia	18	7	44	7	31	3	48	6	124	13
Western Australia	20	25	6	12	9	9	9	11	12	6
Tasmania	18	..	20	..	16	..	6	..	9	..
Commonwealth Court ..	31	21	43	17	45	13	29	23	13	26
Commonwealth Public Service Arbitrator	1	..	3	..	4	..	7	..	2	..
Total	375	95	286	82	265	64	266	92	365	110

3. **Boards Authorized, Awards, etc., in Force.**—Owing to difficulties encountered in the collection of these statistics the tables shown in issues prior to No. 35 under this heading have been discontinued.

4. **Control of Wages During and Since the War.**—Reference might be made to *Labour Report* No. 35, page 55 for a summary of the steps taken during and since the war under the authority of the National Security (Economic Organization) Regulations to " peg " all rates of remuneration throughout all industry (both public and private) at those being paid on 10th February, 1942 and of the steps taken gradually to " unpeg " such wages by various amendments of the regulations mentioned.

§ 2. Rates of Wages and Hours of Labour.

1. **General.**—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts, and therefore are the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations, or industrial agreements.

The index-numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the *Labour Report.*

2. **Weekly Rates of Wage, 1938 to 1946.**—(i) *General.* The average rate of wage for each industrial group is computed by taking the arithmetical average of the rates of wage payable for all classified occupations within that group. These averages are weighted in accordance with census results to give the average of all occupations for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified :—

WAGE RATES OF ADULT MALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included ..	874	909	627	567	489	482	3.948

Rates of Wage.

Particulars.	N.S.W. s.	N.S.W. d.	Vic. s.	Vic. d.	Q'land. s.	Q'land. d.	S.A. s.	S.A. d.	W.A. s.	W.A. d.	Tas. s.	Tas. d.	Aust. s.	Aust. d.
31st December, 1938 ..	95	0	91	2	95	10	87	1	99	1	88	5	93	5
,, ,, 1942 ..	118	3	116	7	110	2	112	3	117	7	108	2	115	8
,, ,, 1943 ..	121	3	119	7	116	10	113	9	122	2	116	9	119	5
,, ,, 1944 ..	121	4	119	6	118	0	113	7	121	10	116	6	119	6
31st March, 1945.. ..	121	4	119	7	118	0	113	8	122	1	116	5	119	7
30th June, 1945	121	0	119	9	119	3	114	1	122	1	116	3	119	8
30th September, 1945 ..	121	1	120	0	119	5	114	5	122	9	116	3	119	11
31st December, 1945 ..	121	10	120	4	119	10	114	5	122	9	116	11	120	4
31st March, 1946 ..	122	0	120	11	119	10	114	10	122	11	117	8	120	8
30th June, 1946	122	4	121	0	120	0	114	11	123	9	117	9	120	11
30th September, 1946 ..	123	3	121	9	120	11	117	2	124	7	118	5	121	10
31st December, 1946 ..	130	11	128	11	128	0	121	4	125	7	125	2	128	6

Index-numbers.

(*Base : Weighted Average Wage for Australia* (51s. 3d.), 1911 = 1,000.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
31st December, 1938 ..	1,854	1,780	1,870	1,700	1,933	1,725	1,823
,, ,, 1942 ..	2,308	2,275	2,150	2,189	2,294	2,111	2,257
,, ,, 1943 ..	2,366	2,333	2,279	2,219	2,383	2,279	2,329
,, ,, 1944 ..	2,367	2,332	2,303	2,216	2,377	2,273	2,332
31st March, 1945 ..	2,367	2,333	2,303	2,218	2,382	2,272	2,333
30th June, 1945	2,361	2,337	2,327	2,226	2,382	2,268	2,336
30th September, 1945 ..	2,362	2,341	2,330	2,233	2,395	2,269	2,340
31st December, 1945 ..	2,377	2,347	2,339	2,233	2,395	2,282	2,348
31st March, 1946 ..	2,380	2,359	2,339	2,240	2,398	2,295	2,354
30th June, 1946	2,387	2,362	2,341	2,243	2,415	2,297	2,360
30th September, 1946 ..	2,404	2,376	2,359	2,287	2,431	2,310	2,378
31st December, 1946 ..	2,554	2,515	2,498	2,368	2,450	2,442	2,507

Except in South Australia in 1933, wages declined in all States during the four years 1930 to 1933, the average rates at 31st December of the latter year being approximately 17 per cent. less than those ruling at the end of 1930. Increases were granted in each of the States during the next six years, the weighted average nominal rate for Australia at 31st December, 1938 being 16 per cent. higher than at the end of 1933. During the war years nominal weekly wages advanced annually in each State, the greatest increase occurring in 1942 (11 per cent. for Australia), followed by an increase of 3 per cent. in the following year, after which they remained comparatively stable until the fourth quarter of 1946 when they advanced 5.4 per cent. due mainly to the increase in the " needs " wage granted by the Commonwealth Court of Conciliation and Arbitration in its judgment of 13th December, 1946. Male wages at 31st December, 1946 were 37.5 per cent. higher than in December, 1938 and 6.8 per cent. higher than in December, 1945.

At the close of 1946 rates were highest in New South Wales, followed in the order named by Victoria, Queensland, Western Australia, Tasmania and South Australia. The highest weighted average rate for Australia was recorded at 31st December, 1946, namely, 128s. 6d. per week.

(iii) *Adult Males—Industrial Groups.* The following table shows for Australia the average weekly rates of wage and index-numbers in each industrial group, and for all groups at the dates specified.

WAGE RATES OF ADULT MALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.

NOTE.—Index-numbers for each industrial group and for all industrial groups are based on the average wage for all groups in 1911 (51s. 3d.) = 1,000. The index-numbers in this table are comparable throughout :—

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage and Index-number at—							
		31st Dec., 1938.	31st Dec., 1943.	31st Dec., 1944.	31st Dec., 1945.	31st Mar., 1946.	30th June, 1946.	30th Sept., 1946.	31st Dec., 1946.
I. Wood, Furniture, etc.	Wage ..	98/2	121/0	121/1	121/4	121/9	121/10	122/10	129/2
	Index-No.	1,916	2,362	2,363	2,368	2,375	2,378	2,397	2,520
II. Engineering, etc.	Wage ..	97/8	121/1	121/2	121/0	121/2	121/2	122/3	129/1
	Index-No.	1,906	2,363	2,364	2,361	2,364	2,365	2,385	2,519
III. Food, Drink, etc.	Wage ..	95/2	117/8	118/0	118/9	118/10	119/0	120/2	126/9
	Index-No.	1,857	2,297	2,303	2,316	2,319	2,323	2,344	2,473
IV. Clothing, Textiles, etc.	Wage ..	91/9	119/7	119/0	118/11	118/11	119/8	120/0	126/11
	Index-No.	1,790	2,334	2,321	2,321	2,321	2,335	2,341	2,476
V. Books, Printing, etc.	Wage ..	112/0	135/4	134/8	134/9	134/9	139/1	139/4	148/2
	Index-No.	2,185	2,640	2,627	2,630	2,630	2,715	2,719	2,891
VI. Other Manufacturing	Wage ..	94/4	118/9	118/8	119/3	119/5	119/11	121/1	128/1
	Index-No.	1,840	2,316	2,315	2,326	2,330	2,340	2,362	2,499
VII. Building ..	Wage ..	104/6	128/11	129/1	130/11	133/11	134/1	135/3	141/10
	Index-No.	2,039	2,516	2,518	2,555	2,613	2,616	2,640	2,768
VIII. Mining, etc. ..	Wage ..	108/2	126/6	126/11	127/2	127/5	127/5	128/6	134/6
	Index-No.	2,111	2,468	2,477	2,482	2,486	2,486	2,507	2,624
IX. Railways, etc...	Wage ..	95/5	121/9	121/10	122/9	123/1	123/3	124/2	130/10
	Index-No.	1,862	2,376	2,377	2,396	2,402	2,405	2,423	2,553
X. Other Land Transport	Wage ..	91/7	112/0	112/1	113/5	113/7	113/7	114/7	121/7
	Index-No.	1,787	2,180	2,188	2,213	2,216	2,217	2,236	2,372
XI. Shipping, etc.(*a*)	Wage ..	97/6	122/10	122/2	122/3	122/3	123/2	124/3	131/6
	Index-No.	1,902	2,397	2,383	2,385	2,385	2,404	2,424	2,566
XII. Agricultural, etc.(*b*)	Wage ..	82/3	118/11	119/4	121/9	121/10	121/10	122/5	129/0
	Index-No.	1,604	2,321	2,328	2,376	2,377	2,377	2,389	2,517
XIII. Domestic, etc.(*b*)	Wage ..	88/3	109/8	109/9	109/9	109/10	110/2	111/3	117/4
	Index-No.	1,722	2,140	2,142	2,142	2,143	2,149	2,170	2,289
XIV. Miscellaneous	Wage ..	90/5	114/3	114/5	114/7	114/8	114/9	115/10	122/6
	Index-No.	1,764	2,230	2,232	2,236	2,238	2,239	2,268	2,390
All Industrial Groups	Wage ..	93/5	119/5	119/6	120/4	120/8	120/11	121/10	128/6
	Index-No.	1,823	2,329	2,332	2,348	2,354	2,360	2,378	2,507

(*a*) Includes the value of victualling and accommodation where supplied. (*b*) Includes the value of board and lodging where supplied.

The foregoing table shows that the highest average weekly wage at 31st December, 1946 was recorded in Group V. (Books, Printing, etc.), 148s. 2d. per week, followed by Groups VII. (Building), 141s. 10d., VIII. (Mining, etc.), 134s. 6d., XI. (Shipping, etc.), 131s. 6d., IX. (Railways, etc.), 130s. 10d., I. (Wood, Furniture, etc.), 129s. 2d. and II. (Engineering, etc.), 129s. 1d. The lowest average rate was recorded in Group XIII., (Domestic, etc.), 117s. 4d. Compared with those prevailing at 31st December, 1945, rates of wage increased in all industrial groups during 1946.

(iv) *Adult Females—States.* The following table shows the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified.

WAGE RATES OF ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included ..	85	87	37	47	24	28	308
RATES OF WAGE.							
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
31st December, 1938 ..	51 10	50 7	53 6	47 9	54 4	49 8	51 3
,, ,, 1942 ..	63 10	64 11	66 4	60 3	64 2	61 3	64 4
,, ,, 1943 ..	67 11	70 2	69 9	61 3	66 6	63 3	68 4
,, ,, 1944 ..	71 3	73 11	74 1	65 4	65 10	68 6	71 11
31st March, 1945 ..	71 3	74 0	74 1	66 1	65 10	68 5	72 0
30th June, 1945	70 11	73 11	74 1	66 1	65 10	68 3	71 10
30th September, 1945 ..	71 0	73 11	74 1	66 1	66 0	68 4	71 11
31st December, 1945 ..	71 3	73 11	74 1	66 1	66 0	68 5	72 0
31st March, 1946 ..	71 3	74 0	74 1	66 1	66 0	68 7	72 0
30th June, 1946	71 5	74 3	74 3	66 6	66 8	68 10	72 3
30th September, 1946 ..	71 9	74 7	74 10	70 9	67 2	69 0	72 11
31st December, 1946 ..	76 0	78 6	79 5	72 10	67 2	72 7	76 9
INDEX-NUMBERS.							
(*Base: Weighted Average for Australia* (27s. 2d.), *30th April,* 1914 = 1,000.)							
31st December, 1938 ..	1,907	1,862	1,969	1,758	2,000	1,828	1,887
,, ,, 1942 ..	2,350	2,391	2,442	2,216	2,361	2,255	2,368
,, ,, 1943 ..	2,501	2,582	2,568	2,253	2,446	2,329	2,516
,, ,, 1944 ..	2,622	2,722	2,726	2,406	2,422	2,520	2,647
31st March, 1945 ..	2,622	2,722	2,726	2,431	2,422	2,517	2,649
30th June, 1945	2,609	2,720	2,726	2,431	2,422	2,512	2,643
30th September, 1945 ..	2,612	2,722	2,726	2,431	2,428	2,516	2,646
31st December, 1945 ..	2,623	2,722	2,726	2,431	2,428	2,517	2,650
31st March, 1946 ..	2,623	2,724	2,726	2,431	2,428	2,525	2,650
30th June, 1946	2,628	2,732	2,734	2,446	2,454	2,532	2,659
30th September, 1946 ..	2,640	2,745	2,755	2,605	2,472	2,538	2,684
31st December, 1946 ..	2,799	2,889	2,923	2,679	2,472	2,673	2,824

It should be noted that the base of these index-numbers is 1914 and not 1911 as in the foregoing tables for adult males. This is because there is no tabulation for adult female rates prior to 1914.

Female rates followed the same downward course as male rates from 1930 to 1933. The weekly average nominal wage for Australia fell from 54s. 1d. at 31st December, 1929, to 43s. 5d. at the same date in 1933, a decline of 10s. 8d., or 20 per cent. As with the rates for males, increases were recorded in all States during the next eleven years. There was practically no movement in 1945 and little in 1946 until the last quarter, when a rise of 5.2 per cent. occurred. The weighted average rate for Australia at 31st December, 1946 had advanced by 33s. 4d. per week over that ruling on 31st December, 1933, and was 49.7 per cent. above the average at 31st December, 1938. The weighted average rate for Australia at 31st December, 1946, namely, 76s. 9d. per week, was the highest recorded to that date.

(v) *Adult Females—Industrial Groups.* The following table shows the weighted average weekly rates of wage payable in Australia to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.

WAGE RATES OF ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Textiles, etc.	I. II., V., and VI. All Other Manufacturing.	XIII. Domestic, etc.(a)	XIV. Miscellaneous.	All Groups.
	RATES OF WAGE.					
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1938..	47 1	49 9	50 6	52 11	54 6	51 3
,, ,, 1942..	59 8	63 11	64 7	63 4	67 1	64 4
,, ,, 1943..	62 3	66 2	71 5	65 10	75 11	68 4
,, ,, 1944..	62 7	72 9	71 10	67 1	76 4	71 11
31st March, 1945 ..	62 9	72 9	71 10	67 5	76 4	72 0
30th June, 1945 ..	62 7	72 8	71 6	67 3	76 1	71 10
30th September, 1945	62 9	72 9	71 6	67 3	76 1	71 11
31st December, 1945..	62 11	72 9	71 9	67 5	76 4	72 0
31st March, 1946 ..	63 5	72 9	71 9	67 5	76 4	72 0
30th June, 1946 ..	64 1	73 2	71 9	67 6	76 4	72 3
30th September, 1946	64 8	73 4	72 5	68 8	77 10	72 11
31st December, 1946..	68 8	77 2	77 3	72 9	81 0	76 9
	INDEX-NUMBERS. (*Base : Weighted Average for Australia* (27s. 2d.), 30*th April*, 1914 = 1,000.)					
31st December, 1938..	1,732	1,831	1,859	1,947	2,004	1,887
,, ,, 1942..	2,195	2,354	2,378	2,332	2,468	2,368
,, ,, 1943..	2,291	2,435	2,629	2,424	2,794	2,516
,, ,, 1944..	2,304	2,678	2,643	2,470	2,809	2,647
31st March, 1945 ...	2,305	2,678	2,643	2,480	2,809	2,649
30th June, 1945 ..	2,304	2,675	2,633	2,474	2,801	2,643
30th September, 1945	2,311	2,678	2,633	2,474	2,801	2,646
31st December, 1945..	2,317	2,678	2,640	2,481	2,809	2,650
31st March, 1946 ..	2,333	2,678	2,641	2,481	2,809	2,650
30th June, 1946 ..	2,358	2,693	2,642	2,484	2,809	2,659
30th September, 1946	2,379	2,699	2,664	2,528	2,865	2,684
31st December, 1946..	2,526	2,840	2,842	2,678	2,980	2,824

(a) Includes the value of board and lodging, where supplied.

During 1946 the rate of wage for female employees in each industrial group increased as follows :—III. (Food, etc.), 5s. 9d. per week ; I., II., V. and VI. (All other manufacturing), 5s. 6d. per week ; XIII. (Domestic, etc.), 5s. 4d. per week ; XIV. (Miscellaneous), 4s. 8d. ; and IV. (Clothing, etc.), 4s. 5d. per week. The weighted average for all groups increased by 4s. 9d. per week.

3. **Relative Hours of Labour and Hourly Rates of Wage, 1938 to 1946.**—(i) *General.* The rates of wage referred to in preceding paragraphs are the minima payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs are reduced to a common basis, namely, the rate of wage per hour. Particulars as at the end of the years 1943 to 1946 compared with 1938 are given in the following table, for males and females separately in each State. These particulars relate to (a) the weighted average

nominal weekly wage; (*b*) the weighted average number of working hours constituting a full week's work; and (*c*) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined and includes the value of board and lodging where supplied in land occupations, and the value of victualling and accommodation where supplied in marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Many of the occupations included in these groups are of a casual or seasonal nature, and the hours of labour are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary definite particulars for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wages to a common basis (i.e., per hour) is to eliminate any difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars of the weekly and hourly wages and hours of labour for adult males and females at the close of the years 1943 to 1946, compared with 1938 are given in the table hereunder :—

WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR OF ADULT WORKERS.

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
	MALE WORKERS.							
1938	Weekly Wage (*a*) ..	95/0	91/2	95/10	87/1	99/1	88/5	93/5
	Working Hours (*b*) ..	44.01	45.75	43.67	46.31	44.34	46.00	44.82
	Hourly Wage (*b*) ..	2/3	2/0¼	2/3	1/10¾	2/4	1/11¼	2/1¾
1943	Weekly Wage(*a*) ..	121/3	119/7	116/10	113/9	122/2	116/9	119/5
	Working Hours (*b*) ..	43.52	43.94	43.18	44.21	43.15	43.37	43.62
	Hourly Wage (*b*) ..	2/9½	2/8¾	2/8¼	2/6½	2/10¼	2/7½	2/8¾
1944	Weekly Wage (*a*) ..	121/4	119/6	118/0	113/7	121/10	116/6	119/6
	Working Hours (*b*) ..	43.50	43.01	43.18	44.21	43.15	43.30	43.61
	Hourly Wage (*b*) ..	2/9½	2/8¾	2/8½	2/6¼	2/10	2/7½	2/8¾
1945	Weekly Wage (*a*) ..	121/10	120/4	119/10	114/5	122/9	116/11	120/4
	Working Hours (*b*) ..	43.50	43.91	43.18	44.07	43.15	43.38	43.59
	Hourly Wage(*b*) ..	2/9½	2/9	2/8¾	2/6½	2/10¼	2/7½	2/9
1946	Weekly Wage (*a*) ..	130/11	128/11	128/0	121/4	125/7	125/2	128/6
	Working Hours (*b*) ..	43.50	43.82	43.18	44.07	43.15	43.38	43.57
	Hourly Wage (*b*) ..	3/0¼	2/11¼	2/11	2/8¾	2/10¾	2/9¾	2/11½
	FEMALE WORKERS.							
1938	Weekly Wage ..	51/10	50/7	53/6	47/9	54/4	49/8	51/3
	Working Hours ..	43.88	44.63	44.03	45.96	45.38	45.10	44.44
	Hourly Wage ..	1/2¼	1/1½	1/2½	1/0½	1/2¼	1/1¼	1/1¾
1943	Weekly Wage ..	67/11	70/2	69/9	61/3	66/6	63/3	68/4
	Working Hours ..	43.88	44.19	44.00	44.00	44.00	44.00	44.03
	Hourly Wage ..	1/6½	1/7	1/7	1/4¾	1/6¼	1/5¼	1/6¾
1944	Weekly Wage ..	71/3	73/11	74/1	65/4	65/10	68/6	71/11
	Working Hours ..	43.88	44.19	44.00	43.99	44.00	44.00	44.03
	Hourly Wage ..	1/7½	1/8	1/8¼	1/5¾	1/6	1/6¾	1/7½
1945	Weekly Wage ..	71/3	73/11	74/1	66/1	66/0	68/5	72/0
	Working Hours ..	43.88	44.19	44.00	43.99	44.00	44.00	44.03
	Hourly Wage ..	1/7½	1/8	1/8½	1/6	1/6	1/6¾	1/7½
1946	Weekly Wage ..	76/0	78/6	79/5	72/10	67/2	72/7	76/9
	Working Hours ..	43.88	44.19	44.00	43.99	44.00	44.00	44.03
	Hourly Wage ..	1/8¾	1/9¼	1/9¾	1/7¾	1/6¼	1/7¾	1/9

(*a*) Weighted average weekly rate in all industrial groups combined. (*b*) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in industrial groups XI. and XII.

(iii) *Index-numbers.* The downward tendency in hours of labour for Australia commenced in the December quarter of 1924, when the weighted averages were 46.66 for males and 46.02 for females, and, excepting for slight increases in 1929 and 1930, the reduction has continued. During 1945 hours for males were reduced slightly in South Australia and Tasmania, and in 1946 in Victoria. The weighted averages for Australia at 31st December, 1946, were 43 57 hours for males and 44.03 hours for females. The effect of changes in hours of labour on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers for all classes combined given in the following table. It should be noted that these comparative index-numbers for males and females are on the 1914 base as against the 1911 base of the earlier tables for adult males. This is because there is no tabulation for adult female rates prior to 1914 :—

WEEKLY AND HOURLY INDEX-NUMBERS OF WAGE RATES : ADULT WORKERS.

(*Base : Weighted Average for Australia, 30th April,* 1914* = 1,000.)

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
MALE WORKERS.								
1938.. ..	Weekly Wage ..	1,725	1,656	1,740	1,581	1,799	1,605	1,696
	Hourly Wage (*a*) ..	1,935	1,741	1,934	1,638	1,968	1,671	1,840
1943.. ..	Weekly Wage ..	2,202	2,170	2,120	2,065	2,217	2,120	2,167
	Hourly Wage (*a*) ..	2,401	2,342	2,307	2,183	2,448	2,260	2,352
1944.. ..	Weekly Wage ..	2,202	2,170	2,143	2,062	2,212	2,115	2,170
	Hourly Wage (*a*) ..	2,405	2,343	2,329	2,173	2,443	2,254	2,355
1945.. ..	Weekly Wage ..	2,212	2,184	2,176	2,078	2,228	2,123	2,185
	Hourly Wage (*a*) ..	2,408	2,355	2,347	2,192	2,446	2,255	2,365
1946.. ..	Weekly Wage ..	2,376	2,340	2,324	2,203	2,280	2,272	2,332
	Hourly Wage (*a*) ..	2,593	2,533	2,509	2,339	2,491	2,423	2,529
FEMALE WORKERS.								
1938.. ..	Weekly Wage ..	1,907	1,862	1,969	1,758	2,000	1,828	1,887
	Hourly Wage ..	2,134	2,050	2,196	1,878	2,164	1,991	2,084
1943.. ..	Weekly Wage ..	2,501	2,582	2,568	2,253	2,446	2,329	2,516
	Hourly Wage ..	2,798	2,869	2,866	2,514	2,730	2,599	2,806
1944.. ..	Weekly Wage ..	2,622	2,722	2,726	2,406	2,422	2,520	2,647
	Hourly Wage ..	2,934	3,024	3,042	2,685	2,703	2,813	2,952
1945.. ..	Weekly Wage ..	2,623	2,722	2,726	2,431	2,428	2,517	2,650
	Hourly Wage ..	2,935	3,024	3,042	2,714	2,709	2,809	2,958
1946.. ..	Weekly Wage ..	2,799	2,889	2,923	2,679	2,472	2,673	2,824
	Hourly Wage ..	3,131	3,209	3,262	2,991	2,759	2,983	3,149

(*a*) See footnote to following table.

* Approximate Weekly Rates—M = 55/1 ; F = 27/2. Hourly Rates—M = 1/2 ; F = 0/6¾.

4. **Weighted Average Nominal Weekly Hours of Labour, Adult Males.**—The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult male workers in each State and Australia at 31st December, 1943 to 1946 compared with 1938.

HOURS OF LABOUR.

INDEX-NUMBERS OF WEEKLY HOURS OF LABOUR OF ADULT MALES.

NOTE.—Index-numbers are based on the average hours of labour for Australia at 30th April, 1914 (48 93) = 1,000. Overtime is excluded.

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
1938.. ..	Weighted average weekly hours of labour (a) ..	44.01	45.75	43.67	46.31	44.34	46.00	44.82
	Index-numbers ..	899	935	893	946	906	940	916
1943.. ..	Weighted average weekly hours of labour (a) ..	43.52	43.94	43.18	44.21	43.15	43.37	43.62
	Index-numbers ..	889	898	882	904	882	886	891
1944.. ..	Weighted average weekly hours of labour (a) ..	43.50	43.91	43.18	44.21	43.15	43.39	43.61
	Index-numbers ..	889	897	882	904	882	887	891
1945.. ..	Weighted average weekly hours of labour (a) ..	43.50	43.91	43.18	44.07	43.15	43.38	43.59
	Index-numbers ..	889	897	882	901	882	887	891
1946.. ..	Weighted average weekly hours of labour (a) ..	43.50	43.82	43.18	44.07	43.15	43.38	43.57
	Index-numbers ..	889	896	882	901	882	887	890

(a) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in Industrial Groups XI. and XII.

5. **Nominal and Effective Wages.**—(i) *General.* Wages are said to be *nominal* when they represent the actual amounts of moneys received in return for labour, and are described as *effective* or *real* when expressed in terms of their equivalent purchasing power, that is, their purchasing power over some definite composite unit or regimen the cost of which can be ascertained at different times. The relation between *nominal* and *effective* or *real* wages was discussed at some length in *Labour Report* No. 6, and was also referred to in *Labour Report* No. 11.

Since it is possible to measure purchasing power over more than one composite unit or regimen it is equally possible to convert any given nominal wage series into more than one series of effective or real wages. Prior to 1936 it was the practice of this Bureau to compute effective wage index-numbers by dividing the nominal wage index-numbers by the corresponding retail price index-numbers for food, groceries and rent of all houses (" A " series). While wage rates were generally varied on the basis of the " A " series index-numbers there was a good deal to be said for this procedure. When the Commonwealth Court abandoned the " A " series, the merits of the " C " series for deflating nominal wage rates were strengthened. The " C " series covers food, groceries, rent for four and five-roomed houses, clothing and miscellaneous household requirements. As the computation of the " A " series was discontinued after the June quarter of 1938, real wages to the end of 1937 are measured in terms of their purchasing power over both the " A " series regimen and the " C " series regimen in the following tables, and over the " C " series only for the subsequent years.

(ii) *Nominal Weekly Wage Index-numbers, Adult Males,* 1901 *to* 1946—*States.* The following table shows for the period 1901 to 1946 the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index-numbers for 1901 and 1911 are based on rates current at the end of December, annual averages not being available. For 1914 and subsequent years, however, the index-numbers are based on the average rates current at the end of the four quarters of each year :—

NOMINAL WAGE INDEX-NUMBERS : ADULT MALES.

(*Base : Weighted Average Wage for Australia*, 1911 = 1,000.)

State.	1901.	1911.	1914.	1921.	1929.	1933.	1938.	1942.	1943.	1944.	1945.	1946.
New South Wales	858	1,003	1,093	1,862	2,012	1,638	1,829	2,210	2,357	2,365	2,367	2,431
Victoria ..	796	985	1,062	1,803	1,964	1,502	1,755	2,172	2,330	2,323	2,340	2,403
Queensland ..	901	997	1,035	1,879	1,976	1,720	1,854	2,091	2,207	2,288	2,326	2,384
South Australia..	819	1,013	1,061	1,697	1,891	1,423	1,688	2,065	2,212	2,212	2,228	2,285
Western Australia	1,052	1,152	1,223	1,832	1,960	1,584	1,876	2,215	2,349	2,368	2,389	2,424
Tasmania ..	719	799	1,027	1,745	1,840	1,519	1,718	2,057	2,196	2,268	2,273	2,336
Australia ..	848	1,000	1,081	1,826	1,972	1,584	1,799	2,164	2,309	2,326	2,339	2,400

(iii) *Effective or Real Wage Index-numbers, Adult Males*, 1901 *to* 1946—*States*. In obtaining the effective wage index-numbers in the following tables, the nominal wage index-numbers shown above have been divided by the corresponding retail price index-numbers for the capital city and multiplied by 1,000.

The index-numbers for 1901 and 1911 which are based on nominal rates of wage current at the end of December may be taken as substantially accurate, since the movement in wages during the course of any one year prior to 1914 was comparatively slight.

EFFECTIVE OR REAL WAGE INDEX-NUMBERS FOR ADULT MALES (FULL WORK).

Measured in terms of purchasing power over the " A " series regimen.

(*Base : Weighted Average Real Wage in Australia in* 1911 = 1,000).

State.	1901.	1911.	1914.	1921.	1929.	1931.	1932.	1933.	1934.	1935.	1936.	1937.
New South Wales ..	961	973	906	1,079	1,050	1,160	1,150	1,138	1,101	1,095	1,090	1,107
Victoria..	915	1,037	961	1,038	1,084	1,162	1,126	1,139	1,114	1,092	1,075	1,099
Queensland	1,172	1,090	1,038	1,244	1,220	1,345	1,376	1,417	1,377	1,323	1,261	1,237
South Australia	948	957	929	1,027	1,067	1,178	1,133	1,152	1,144	1,149	1,143	1,151
Western Australia ..	1,024	1,023	1,070	1,139	1,143	1,232	1,212	1,246	1,221	1,260	1,251	1,253
Tasmania	827	838	942	977	1,064	1,104	1,067	1,094	1,086	1,099	1,094	1,088
Australia	964	1,000	948	1,076	1,082	1,185	1,168	1,178	1,148	1,135	1,121	1,133

Since the " C " series index-numbers were not compiled for periods prior to November, 1914, it has been assumed for the purpose of the following table that fluctuations between 1911, the base of the table, and 1914 in the " C " series would have been similar to the fluctuations observed in the " A " series.

EFFECTIVE OR REAL WAGE INDEX-NUMBERS FOR ADULT MALES (FULL WORK).

Measured in terms of purchasing power over the " C " series regimen.

(*Base : Weighted Average Real Wage in Australia in* 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1933.	1937.	1938.	1939.	1942.	1943.	1944.	1945.	1946.
New South Wales ..	..	925	1,073	1,130	1,186	1,168	1,207	1,207	1,204	1,234	1,247	1,249	1,258
Victoria	..	954	1,084	1,164	1,147	1,155	1,180	1,180	1,190	1,233	1,234	1,243	1,260
Queensland.. ..	..	1,022	1,227	1,290	1,382	1,277	1,311	1,306	1,221	1,241	1,288	1,307	1,314
South Australia ..	..	914	1,034	1,099	1,086	1,128	1,146	1,147	1,159	1,209	1,214	1,218	1,229
Western Australia ..	..	1,043	1,096	1,152	1,177	1,242	1,281	1,308	1,259	1,282	1,292	1,300	1,296
Tasmania	..	902	984	1,108	1,110	1,141	1,167	1,153	1,150	1,184	1,237	1,237	1,237
Australia ..	1,000	948	1,087	1,151	1,187	1,178	1,209	1,211	1,196	1,231	1,246	1,252	1,263

In the tables above, the effective wage index-numbers are computed to the one base, that of Australia for 1911. As the index-numbers are comparable in all respects, comparisons may be made as to the increase or decrease in the effective wage index-number for any State over any period of years.

(iv) *Effective or Real Wage Index-numbers,* 1901 *to* 1946—*Australia.* In the following table similar index-numbers are given for Australia as a whole under both the " A " and " C " series. These are obtained by dividing the nominal wage index-numbers for Australia for the year concerned by the corresponding retail price index-numbers for the Six Capital Cities and multiplying by 1,000.

NOMINAL AND EFFECTIVE OR REAL WAGE INDEX-NUMBERS (FULL WORK).

(*Base : Weighted Average Real Wage in Australia in* 1911 = 1,000.)

Year.	Nominal Weekly Wage Index-numbers.	Retail Price Index-numbers.		Effective or Real Wage Index-numbers, i.e., Relative Purchasing Power over Regimen of—	
		" A " Series (Food, Groceries and Rent of all Houses).	" C " Series (All Items).	" A " Series.	" C " Series.
1901	848	880	..	964	..
1910	955	970	..	985	..
1911	1,000	1,000	(1,000)	1,000	(1,000)
1916	1,144	1,324	1,319	864	867
1917	1,226	1,318	1,406	930	872
1918	1,270	1,362	1,501	932	846
1919	1,370	1,510	1,695	907	808
1920	1,627	1,785	1,935	911	841
1921	1,826	1,697	1,680	1,076	1,087
1922	1,801	1,600	1,619	1,126	1,112
1923	1,805	1,700	1,664	1,062	1,085
1924	1,840	1,681	1,637	1,095	1,124
1925	1,861	1,722	1,654	1,081	1,125
1926	1,914	1,786	1,677	1,072	1,141
1927	1,946	1,766	1,662	1,102	1,171
1928	1,963	1,760	1,675	1,115	1,172
1929	1,972	1,822	1,713	1,082	1,151
1930	1,939	1,683	1,618	1,152	1,198
1931	1,752	1,479	1,448	1,185	1,210
1932	1,639	1,403	1,377	1,168	1,190
1933	1,584	1,345	1,335	1,178	1,187
1934	1,590	1,385	1,355	1,148	1,173
1935	1,612	1,420	1,380	1,135	1,169
1936	1,638	1,461	1,409	1,121	1,162
1937	1,707	1,507	1,448	1,133	1,178
1938	1,799	(*a*)	1,488	(*a*)	1,209
1939	1,846	(*a*)	1,526	(*a*)	1,211
1940	1,889	(*a*)	1,588	(*a*)	1,190
1941	1,997	(*a*)	1,673	(*a*)	1,194
1942	2,164	(*a*)	1,809	(*a*)	1,196
1943	2,309	(*a*)	1,876	(*a*)	1,231
1944	2,326	(*a*)	1,867	(*a*)	1,246
1945	2,339	(*a*)	1,868	(*a*)	1,252
1946	2,400	(*a*)	1,900	(*a*)	1,263

(*a*) Not available.

NOTE.—For years prior to 1914 the nominal wage index-numbers relate to the end of the year only, but from 1914 onwards these figures, in addition to those for retail prices, are averages for the whole year.

§ 3. Basic Wages in Australia.

1. **General.**—Basic wages in Australia are fixed by various industrial tribunals operating under Commonwealth and State Arbitration Acts, and are varied from time to time according to changes in cost of living, constitution of the family unit, etc. In the industrial legislation of New South Wales, Queensland, South Australia and Western Australia, provision is made for the tribunals appointed under the Acts to determine the basic rates of wage to be paid to adult unskilled workers. In Tasmania provision for the declaration of a basic rate of wage is not included in the industrial Acts in force. The Wages Board system operates in this State, and each Wages Board determines the rate of wage to be paid to the unskilled worker when the determination for an industry or calling is under review. In Victoria, however, the same Wages Board system exists, but by amendments of the Factories Act, operative from 17th October, 1934, Wages Boards are obliged to adopt Commonwealth Award rates and conditions " which such Boards are under the Factories and Shops Acts empowered to include in their determinations." As the power of the Commonwealth Arbitration Court is limited by the Constitution to the settlement, by conciliation and arbitration, of industrial disputes extending beyond the limits of any one State, no similar provision respecting the determination of a basic wage is to be found in the Commonwealth Conciliation and Arbitration Act. In practice, the Court does declare a Commonwealth basic wage and uses the wage so declared as a basis for all awards made by it in the exercise of its jurisdiction. That is, upon a new basic wage being declared, the awards made in the settlement of all interstate industrial disputes are re-opened and amended accordingly. In addition to the " basic " wage, these tribunals also determine what is known as the " secondary " wage—" the extra payment to be made for trained skill or other exceptional qualities necessary for an employee exercising the functions required."* The term " minimum " wage, on the other hand, is used to express the lowest rate payable in a particular industry, and is either equal to, or greater than, the " basic " wage.

2. **The Commonwealth Basic Wage.**—(i) *General.* The doctrine of a basic wage was propounded as far back as 1890 by Sir Samuel Griffith, Premier of Queensland, and the same principle was enunciated in the New South Wales Arbitration Court in somewhat similar terms by Mr. Justice Heydon in 1905. In spite, however, of these pronouncements and the fact that wage-fixing tribunals had been in operation as early as 1896 (in the State of Victoria), it was not until 1907 that the first basic wage, as such, was declared by a Court in Australia. This was made by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, and it was defined as the lowest wage which can be paid to an unskilled labourer on the basis of " the normal needs of an average employee regarded as a human being living in a civilized community."† This declaration was made by way of an order in terms of Section 2 (*d*) of the Excise Tariff 1906 in the matter of an application by H. V. McKay, of the Sunshine Harvester Works, Victoria, from which was derived the title of the " Harvester Wage " by which it is popularly known. The rate of wage declared in this case was 7s. per day or £2 2s. per week for Melbourne, the amount considered reasonable for " a family of about five."‡ The constituent parts of this amount were £1 5s. 5d. for food, 7s. for rent, and 9s. 7d. for all other expenditure.

The " Harvester " basic rate was adopted by the Commonwealth Arbitration Court for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of the retail price index-numbers, covering food and groceries and rent of all houses (" A " series), for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. These index-numbers had been taken back to 1901, with the year 1911 as base, and disclosed not only considerable percentage increases since 1907, but also large disparities in the relative purchasing power of money in the various towns. The basic rates for towns were thereafter fixed largely on their respective index-numbers, taking the index-number 875 for Melbourne for the year 1907 as being equivalent to the

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* Mr. Justice Higgins—*A New Province of Law and Order.*
† Ibid.
‡ *See* page 478 for Court's interpretation in 1940 Basic Wage Inquiry of the " family unit ".

"Harvester" rate of 42s. per week, or the base of the table 1,000 as being equivalent to 48s. per week. Exceptions were made in the case of many country towns, where certain "loadings" were applied to counterbalance their lower index-numbers due to cheaper rentals.*

In 1922 an amount known as the "Powers' 3s."† was added as a general "loading" to the weekly wage for the purpose of securing to the worker during a period of rising prices the full equivalent of the "Harvester" standard. In the same year the system was instituted of making regular quarterly adjustments of the basic wage to accord with variations in purchasing power as disclosed by the "A" Series retail price index-numbers, and of basing the adjustments on the index-number for the quarter in place of that for the previous calendar year or the year ended the preceding quarter.

The Commonwealth Conciliation and Arbitration Act provides that the "basic" wage, or any alteration therof including the principles on which it is computed, together with any variation or interpretation of any award involving any such alteration, shall be considered by a Court constituted by the Chief Judge and not less than two other Judges, and must be approved by a majority of the members of that Court. By a judgment of the High Court on 21st April, 1933, the "basic" wage is taken to mean for the foregoing purpose not only the "Harvester" wage but any "loadings" forming part of the primary wage of an unskilled labourer. A "loading" is defined as an addition to the "basic" wage as compensation for some peculiar condition of labour or environment, and not by way of "margin for skill". The wage payable for skilled labour is assessed on the basis of the "basic" wage, including "loadings."

The adequacy or otherwise of the "Harvester" standard has been the subject of much discussion, the author of the judgment himself urging on several occasions the need for its review. The abnormal conditions during and for some time after the 1914–18 War hindered such a review which was regarded as less urgent by reason of the fact that wages throughout Australia were being automatically adjusted to changes in retail prices. A Royal Commission (referred to later) was appointed in 1920 to assess a basic wage, but its recommendations were not carried out.

No change was made in the method of fixation and adjustment of the basic wage until the onset of the depression which began to be felt severely during 1930. Applications were then made to the Court by employers for some greater measure of reduction of wages than that afforded by the automatic adjustments to falling retail prices. An account of the proceedings which resulted in the Court reducing all wages under its jurisdiction by 10 per cent. from 1st February, 1931, is given in *Labour Report* No. 23, page 74. Reference is also made to the Court's refusal in June, 1932, and May, 1933, to remove this special reduction.

(ii) *Basic Wage Inquiry*, 1934. The "Harvester" standard, adjusted to retail price variations, continued as the theoretical basis of the wage of the Commonwealth Court until 30th April, 1934, when it was superseded by a judgment delivered on 17th April, 1934, full particulars of which appear in Official Year Book No. 29, 1936, page 545. The basic wage declared on this occasion (subsequently referred to as the "Needs" Basic Wage 1934) was as follows for the six capital cities :—

	s.	*d.*		*s.*	*d.*
Sydney	67	0	Adelaide	64	0
Melbourne	64	0	Perth	66	0
Brisbane	61	0	Hobart	67	0

Six Capital Cities, 65s. 0d.

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* As these indexes covered only about 60 per cent. of household expenditure, a low index due to low rentals would wrongly presume low costs in the remaining uninvestigated 40 per cent. of household expenditure and *vice versa*.

† Awarded by Mr. Justice Powers in the Gas Workers' case.

The following is a comparison for the capital cities of the basic rates granted by the judgment and those ruling under previous practices of the Court :—

COMPARISON OF BASIC RATES AWARDED FOR CAPITAL CITIES.

City.	New Rates Awarded 1st May, 1934, "C" Series.	Rates being paid prior to 1st May, 1934.		Increase (+) or Decrease (−) in New Rates as compared with—			
		Under "D" Series less 10 per cent. "Cut."(a)	Under "A" Series (Full).(b)	"D" Series.		"A" Series.	
				Full.	Less 10 per cent. "Cut."	Full.	Less 10 per cent. "Cut."
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Sydney	67 0	66 11	72 0	−7 4	0 1	−5 0	+2 2
Melbourne ..	64 0	63 4	67 6	−6 4	0 8	−3 6	+3 3
Brisbane ..	61 0	59 4	62 0	−4 11	1 8	−1 0	+5 2
Adelaide ..	64 0	60 2	63 0	−2 10	3 10	+1 0	+7 4
Perth	66 0	59 3	64 0	+0 2	6 9	+2 0	+8 5
Hobart	67 0	64 10	70 0	−5 0	2 2	−3 0	+4 0
Six Capitals ..	65 0	63 9	68 0	−5 10	1 3	−3 0	+3 10

(a) Calculated to nearest 1d., and including the equivalent of the "Powers' 3s.". (b) Calculated to the nearest 6d., and including "Powers' 3s." (in full).

The 10 per cent. special reduction in wages referred to above ceased to operate upon the introduction of the new rates, and the basis of the periodical adjustments to retail price variations was transferred from the "A" and the "D" Series to the "C" Series of Index-numbers which covers Food and Groceries, Rent of 4-roomed and 5-roomed Houses, Clothing, Fuel, Light, Household Utensils, Household Drapery, Fares, and other Miscellaneous household requirements. The base of the table (1,000) was taken by the Court as equal to 81s. per week. This gave the rates in Column 2 for the capital cities on the basis of their respective index-numbers. In effect, the new rate for the Six Capital Cities was the same as that previously paid under the "A" Series, without the "Powers' 3s." and without the 10 per cent. reduction. Certain towns gained and others lost in comparison with rates under the "A" Series, owing to the different relationship of towns under the "A" and the "C" Series.

In view, however, of the fact that the vast majority of workers were being paid the rates shown in Column 3 under the "D" Series Retail Price Index (which rates allowed for the 10 per cent. "cut" in wages), the differences compared with the full basic wage standard established by the Court from 1st May, 1933 by means of this Series were as shown in Column 5. The full rates under this Series may be obtained by adding one-ninth to those rates in Column 3.

(iii) *Basic Wage Inquiry*, 1937. In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s. which on current index-numbers would have represented an average increase of about 10s. per week. The hearing extended from 10th May to 4th June, 1937, and the Court delivered judgment on 23rd June. The chief features of the judgment were :—

(a) Various amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" on the rates payable under the "shilling table" as determined by the 1934 judgment. The latter was referred to in the judgment as the "needs" portion of the total resultant basic wages. The "loadings" and resultant "total basic wages" for the six capital cities were as follows :—

City.	"Needs" Basic Wage.	"Loading."	Total Basic Wage.
	s. d.	*s. d.*	*s. d.*
Sydney	72 0	6 0	78 0
Melbourne	69 0	6 0	75 0
Brisbane	68 0	6 0	74 0
Adelaide	68 0(*a*)	4 0	72 0
Perth	70 0(*a*)	4 0	74 0
Hobart	70 0(*b*)	4 0	74 0
Six Capitals	70 0	5 0	75 0

(*a*) An additional 1s. was actually being paid under the "2s. minimum adjustment" provision.
(*b*) One shilling less was being paid under the "2s. minimum adjustment" provision.

(*b*) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment are reprinted in Official Year Book No. 30, and in *Labour Report* No. 28, p. 77.

(iv) "*Lag*" *in Adjustments.* The Commonwealth Court on 19th December, 1939 heard an application by the unions that the date of adjustment of the basic wage in accordance with the variations in the "Court" Series of index-numbers be brought nearer to the period upon which the variation was based. In a judgment delivered on the same day the Court directed that such adjustments be made one month earlier. The effect, therefore, was to make future adjustments operative from the beginning of the first pay-period to commence in a February, a May, an August or a November.

(v) *Basic Wage Inquiry,* 1940. On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series are based) from 81s. to 100s. per week, and the abolition of the present "Prosperity" loadings, which would be regarded as incorporated in the new rate mentioned. Judgment was delivered on 7th February, 1941, the Court unanimously refusing to grant any increase, and deciding that the application should not be dismissed but stood over for further consideration after 30th June, 1941. The application was refused mainly owing to the uncertainty of the economic outlook under existing war conditions (*see* (vi) following).

In regard to the popular idea that the basic wage of the Commonwealth Court of Conciliation and Arbitration was identified with a specific family unit, the Chief Judge made the following statements to clarify the position : "The Court has always conceded the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never as the result of its own inquiry specifically declared what is an average family or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor . . . . . . What should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms. That, no doubt, is the object, but the adoption of something like the real average family as the unit to be provided for is not without its use in the attainment of that object. There is no clear means of measuring the general wage-paying capacity of the total industry of a country. All that can be done is to approximate and one of the methods of approximation is to find out the actual wage upon which well-situated labourers are at the time maintaining the average family unit.

We may be pardoned for saying that Mr. Justice Higgins very wisely used this criterion in the 'Harvester' case. Moreover, if the average-sized families of such well-situated labourers have become accustomed to enjoy, and do actually enjoy, a certain standard of living in our community, it may reasonably be assumed that such a standard for all labourers is probably not beyond the capacity of industry in general to provide. Therefore in determining the amount of a living or basic wage there is sound economic warranty for the ascertainment of the real average family unit and of the cost of providing something like the standard which such families of well-employed labourers have already reached. But obviously, if the real average family unit is departed from, or a standard is sought for the likely maintenance of which experience gives no reason to hope, then an unrealizable wage-level may be ordained . . . . It may be that in the light of past experience the Court should conduct a specific inquiry as to the cost of living of an average family, but under war conditions, such an inquiry would be futile. More than ever before wage fixation is controlled by the economic outlook ".

The Chief Judge further stated : " I was impressed by the new evidence and argument as to the inadequacy of the earnings of the lower-paid wage earners with families. On our accepted standards of living, looking at it from the needs point of view only, I regard the present basic wage as adequate for a family unit of three persons, but think it offers only a meagre existence for a family unit of four. When the unit gets beyond four hardship is often experienced." He suggested that the more logical system would be to grade the basic wage according to family responsibilities and that, notwithstanding the increase in aggregate wages, the benefits resulting from a re-apportionment of national income to increase the wages of those with more than one dependent child would more than offset the inflationary tendency of provision for a comprehensive scheme of child endowment, and that if a scheme of this nature were established, as recently announced by the Commonwealth Government,* future fixations of the basic wage would be greatly simplified. The other two Judges (O'Mara, J., and Piper, J.), in separate judgments, agreed with that of the Chief Judge, particularly in regard to the need for a child endowment scheme as a solution of the main problem.

(vi) " *Interim* " *Basic Wage*, 1946. As the result of (*a*) an application made on 30th October, 1946 (during the course of the Standard Hours Case) by the Attorney-General for the Commonwealth for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (see (v) *supra*), (*b*) a number of fresh cases which had come to the Court since 1941, and (*c*) an application by the Australasian Council of Trade Unions on behalf of the unions for an " interim " basic wage declaration, the Court, on 25th November, 1946, commenced the hearing of this case. The case ended on 10th December, 1946 and judgment was delivered on 13th December, 1946 whereby an increase of 7s. per week was granted in the " needs " portion of the basic wage then current and based on the weighted average " Court " index-number for the Six Capital Cities (as a whole) for the September quarter, 1946. This had the effect of raising the base (1923–27) index-number of the " Court " Series Index from 81.0 to 87.0, the corresponding " needs " basic wage from 81s. to 87s. per week, and the current rate for the Six Capital Cities as a whole from 93s. to 100s. per week. All " loadings " on the basic wage were retained at their existing amounts until otherwise ordered by the Court.

The immediate monetary effect was to increase by 7s. per week the basic wage in each of the capital cities (with the exception of Hobart, where the increase was 6s.), and in most of the other towns or combinations of towns—the position of the index-number for a town in the new Automatic Adjustment Scale (on the new base rate of 87s.) determining whether the increase was 7s. or 6s. The date of operation for the majority of workers affected was the beginning of the first pay-period commencing in the month of December, 1946, in certain industries as from 1st December, 1946 and for certain other groups of workers from dates fixed by Judges dealing with individual applications for the increase.

Further details of this judgment may be obtained from *Labour Report* No. 35 (1945 and 1946), page 85.

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* Legislation covering a scheme to become operative on 1st July, 1941, was actually passed by the Commonwealth Parliament on 3rd April, 1941—*see* page 486 for details.

(vii) *Current Commonwealth Basic Wage Rates.* The basic wage rates of the Commonwealth Court for adult males, including the "loadings" granted in 1937, operative at 1st August, 1948, are as follows :—

	s.	d.		s.	d.
New South Wales—			South Australia—		
Sydney	120	0	Adelaide	114	0
Newcastle	*a*120	0	Five Towns (*d*)	113	0
Broken Hill	125	0			
Five Towns (*d*)	119	0	Western Australia—		
			Perth	112	0
Victoria—			Kalgoorlie	121	0
Melbourne	117	0	Geraldton	117	0
Geelong	*b*117	0	Five Towns (*d*)	112	0
Warrnambool	*b*117	0			
Mildura	*b*117	0	Tasmania—		
Yallourn	*c*123	6	Hobart	115	0
Five Towns (*d*)	116	0	Launceston	112	0
			Queenstown	114	0
			Five Towns (*d*)	114	0
Queensland—					
Brisbane	113	0	Thirty Towns(*d*)	116	0
Five Towns (*d*)	113	0	Six Capital Cities (*d*)	116	0

(*a*) Based on Sydney. (*b*) Based on Melbourne. (*c*) Based on Melbourne plus 6s. 6d. loading. (*d*) Weighted average.

The rate for provincial towns other than those mentioned above is 3s. less than that of their respective capital cities. The rate for adult females—prescribed by the individual judges—is approximately 54 per cent. of the adult male rate.

A table will be found on page 88 of *Labour Report* No. 35 (1945 and 1946) showing the quarterly movements of this wage in all capital cities and the six capital cities as a whole during the years 1939 to 1947.

3. **Australian Territories.**—A full account of the basis upon which the basic wages are determined in (*a*) Australian Capital Territory and (*b*) Northern Territory (both north and south of the 20th parallel of south latitude) will be found on pages 95 to 99 of *Labour Report* No. 35, for 1945 and 1946.

The latest basic rates payable in these Territories are as follows :—

Australian Capital Territory : £6 5s. 6d. per week (in respect only of workers outside the Commonwealth Public Service), operative from 1st August, 1948 ;

Northern Territory : (i) North of 20th Parallel of south latitude ("Darwin" rate)—£6 14s. 9d. per week ; (ii) South of 20th Parallel ("Port Augusta" rate)—£5 19s. per week, operative from 1st August, 1948.

4. **Basic Wage Rates for Females.**—Reference should be made to the *Labour Report* No. 35 for 1945 and 1946 (page 88) for a statement of the general principles followed by the Commonwealth Court of Conciliation and Arbitration in fixing basic wage rates for females in relation to those of males, and of the principles followed by the Women's Employment Board which, operated over the period March, 1942 to October, 1944 in respect only of females in war industries employed on work usually performed by males, or on work which, immediately prior to the outbreak of war, was not performed in Australia by any person.

5. **State Basic Wages.**—(i) *New South Wales.* The first determination under the New South Wales Industrial Arbitration Act of a standard living wage for adult male employees was made on 16th February, 1914, by the Court of Industrial Arbitration. The Board of Trade was established in 1918 with power to determine the living wage for adult male and female employees in the State. The Board made numerous declarations from 1918 to 1925, but ceased to function after the Industrial Arbitration (Amendment) Act 1926 established the Industrial Commission of New South Wales, which exercised the powers of the Board of Trade from 15th April, 1926.

The adult male rate was determined on the family unit of a man, wife and two children from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. With the adoption in 1937 of the Commonwealth basic wage referred to below, however, the identification of a specified family unit with the basic wage disappeared.

Employees in rural industries are not covered by the rates shown in the following table; a wage for rural workers of £3 6s. per week was in force for twelve months from October, 1921, and a rate of £4 4s. operated from June, 1927, to December, 1929, when the power of industrial tribunals to fix a living wage for rural workers was withdrawn.

The variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937, are shown in the following table. Thereafter changes are made automatically in accordance with the procedure outlined in the next paragraph, and the latest current rate payable will be found in the table in sub-par. vi, page. 484.

BASIC WAGE VARIATIONS IN NEW SOUTH WALES. (*State Jurisdiction.*)

Male.				Female.			
Date of Declaration.	Basic Wage per Week.			Date of Declaration.	Basic Wage per Week.		
	£	*s.*	*d.*		£	*s.*	*d.*
16th February, 1914	2	8	0	..	..		
17th December, 1915	2	12	6	..	..		
18th August, 1916	2	15	6	..	..		
5th September, 1918	3	0	0	17th December, 1918	1	10	0
8th October, 1919	3	17	0	23rd December, 1919	1	19	0
8th October, 1920	4	5	0	23rd December, 1920	2	3	0
8th October, 1921	4	2	0	22nd December, 1921	2	1	0
12th May, 1922	3	18	0	9th October, 1922	1	19	6
10th April, 1923	3	19	0	10th April, 1923	2	0	0
7th September, 1923	4	2	0	7th September, 1923	2	1	6
24th August, 1925	4	4	0	24th August, 1925	2	2	6
27th June, 1927	4	5	0	27th June, 1927	2	6	0
20th December, 1929	4	2	6	20th December, 1929	2	4	6
26th August, 1932	3	10	0	26th August, 1932	1	18	0
11th April, 1933	3	8	6	11th April, 1933	1	17	0
20th October, 1933	3	6	6	20th October, 1933	1	16	0
26th April, 1934	3	7	6	26th April, 1934	1	16	6
18th April, 1935	3	8	6	18th April, 1935	1	17	0
24th April, 1936	3	9	0	24th April, 1936	(*a*)1	17	6
27th October, 1936	3	10	0	27th October, 1936	1	18	0
27th April, 1937	(*b*)3	11	6	27th April, 1937	1	18	6

(*a*) Rate declared, £1 15s. 6d., but law amended to provide a rate for females at 54 per cent. of that for males. (*b*) *See* below.

Following on the judgment of the Commonwealth Arbitration Court referred to on page 477, the Government of New South Wales decided to make the State Basic Wage accord with the Commonwealth rates ruling in the State, and secured an amendment of the Industrial Arbitration Act to give effect thereto. The Act (No. 9 of 1937) was passed on 7th October, 1937, and was to operate from the commencement of the first pay period in October, practically from 1st October, 1937. The general principles laid down by the Commonwealth Court were followed as closely as practicable, and provision was made for the automatic adjustment of wages in conformity with variations in retail prices as shown by the Commonwealth Court's "All Items" Retail Price Index-numbers, shortly known as the "Court" Series of Index-numbers. The Commonwealth Court's principle of treating the "prosperity loadings" as a separate and non-adjustable part of the total basic wage was adopted. The basic rate for adult females was fixed at 54 per cent. of the adult male rate to the nearest sixpence. The provisions of the main Acts for the periodic declaration of the living wage by the Industrial Commission were repealed, but the amending Act placed on the Commission the responsibility of altering all awards and agreements in conformity with the intentions of the new Act; to define boundaries within which the various rates are to operate; and to specify the appropriate "Court" Series retail price index-numbers to which they are to be related.

Compared with State adult basic wages of £3 11s. 6d. per week for males, and £1 18s. 6d. for females operative at the time, the alteration represented for males increases of 6s. 6d. in Sydney; 3s. 6d. in Country districts (with certain exceptions); and 4s. 6d. for railway and other Crown employees as defined by the Act. For females the increases were 54 per cent. of the foregoing, and amounted to 3s. 6d., 2s., and 2s. 6d., respectively.

The latest rates applicable in the metropolitan area from 1st August, 1948 are £6 for males and £3 5s. for females.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until superseded by the Commonwealth Government Scheme operative from 1st July, 1941, and a brief account of the main features of the system appears in § 4, par. 2 hereafter.

(ii) *Victoria and Tasmania.* A State basic rate of wage is not declared in Victoria and Tasmania. In these States the Wages Board system of wage fixation is in operation, and each Board determines the minimum rate of wage to be paid in the industry or calling under review. In the majority of cases the practice of the Commonwealth Arbitration Court of adjusting wages in accordance with variations in retail prices has been followed in the past by these bodies. In the case of Victoria, by amendments of the Factories and Shops Act No. 4275 of 1934 and No. 4461 of 1936, it is now obligatory on all Wages Boards to adopt such provisions of Commonwealth Awards which such Boards are empowered under the Factory and Shops Acts to include in their determinations The Secretary of Labour is also empowered under this Act to make adjustments of wages according to variations in retail price index-numbers without calling the Board together. The latest Commonwealth adult rate for Melbourne is £5 17s. per week (operative from 1st August, 1948), and for Hobart £5 15s. per week (operative from 1st August, 1948). Female rates are approximately 54 per cent. of those rates.

(iii) *Queensland.* The first formal declaration by the Industrial Arbitration Court in this State of a basic wage was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. per week for adult males had been generally recognized by the Court in its awards as the basic or living wage. The basic wage is nominally intended to provide for the needs of a man, his wife and three children. The variations in the adult basic wages determined by the Industrial Arbitration Court are shown below:—

BASIC WAGE VARIATIONS IN QUEENSLAND. (*State Jurisdiction.*)

Date of Operation.	Adult Basic Wage.	
	Male.	Female.
	£ *s.* *d.*	£ *s.* *d.*
1st March, 1921	4 5 0	2 3 0
1st March, 1922	4 0 0	2 1 0
28th September, 1925 (*a*)	4 5 0	2 3 0
1st August, 1930	4 0 0	2 1 0
1st December, 1930	3 17 0	1 19 6
1st July, 1931	3 14 0	1 19 0
1st April, 1937	3 18 0	2 1 0
1st April, 1938	4 1 0	2 3 0
7th August, 1939	4 4 0	2 5 0
31st March, 1941	4 9 0	2 8 0
4th May, 1942 (*b*)	4 11 0	2 9 6
23rd December, 1946 (*c*)	5 5 0	3 0 6

(*a*) Fixed by Basic Wage Act.
(*b*) Quarterly adjustments provided by judgment of 21st April, 1942—see below for latest rates.
(*c*) Consequent on "Interim" basic wage of Commonwealth Court of December, 1946.

The rates shown above are applicable throughout the South-Eastern Division of the State, which includes the metropolitan area; allowances are added for the following divisions—Northern, 10s.; North-Western, 17s. 4d.; Mackay, 5s. 6d.; and South-Western, 7s. 4d. Half of these allowances are granted to females.

On 15th April, 1942, the Court declared the rates operative from 31st March, 1941 as adequately meeting the requirements of Section 9 of the Industrial Conciliation and Arbitration Act 1932, having regard to the level of the "C" Series (All Items) retail Price Index for Brisbane for the December quarter, 1941. In order to ensure, however, that it would continue to do so under present exceptional conditions, the Court decided to make a quarterly declaration of the basic wage on the basis of the variations in the "cost of living" as disclosed by the "C" Series Index for Brisbane, commencing with the figures for the March quarter, 1942. This declaration was duly made by the Court on 21st April, 1942, at the rates of £4 11s. for adult males, and £2 9s. 6d. for adult females. The latest rates are £5 17s. for adult males, and £3 10s. 6d. for adult females, and have been operative since 2nd August, 1948.

(iv) *South Australia.* The Industrial Code 1920–1943 provides that the Board of Industry shall after public inquiry declare the living wages to be paid to adult male and female employees. Prior to the passing of this Act the living wage was declared by the Industrial Court, the first award, 7s. per day, being made by Mr. Justice Gordon in the Brushmakers' Case in December, 1908.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. per week.

The family unit is not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage is to be declared is a man with a wife and three children.

Following on the declaration of an "interim" increase in its "needs" basic wage by the Commonwealth Court of Conciliation and Arbitration on 13th December, 1946 (*vide* p. 479) the South Australian Parliament, by virtue of the Economic Stability Act No. 52 of 1946, and other enabling powers, provided for the Governor, by proclamation, to declare the "daily living wage" for adult males in the metropolitan area to be one-sixth of the Commonwealth weekly basic wage for this area (102s. per week, inclusive of the "prosperity loading" of 4s.) and to be operative from 7th January, 1947. The Act mentioned also provided for similar proclamations in respect of any adjustment of such wage, but the powers of the Board of Industry to declare a "living wage" were retained, and any such wage so declared will supersede that declared by proclamation.

The variations in the living wages determined by the Board of Industry are shown below :—

BASIC WAGE VARIATIONS IN SOUTH AUSTRALIA. (*State Jurisdiction.*)

Male.				Female.			
Date of Operation.	Basic Wage per Week.			Date of Operation.	Basic Wage per Week.		
	£	*s.*	*d.*		£	*s.*	*d.*
4th August, 1921	3	19	6	1st September, 1921	1	15	0
27th April, 1922	3	17	6	..	..		
8th November, 1923	3	18	6	..	..		
15th May, 1924	4	2	0	13th November, 1924	1	18	0
13th August, 1925	4	5	6	3rd September, 1925	1	19	6
30th October, 1930	3	15	0	15th January, 1931	1	15	0
10th September, 1931	3	3	0	24th December, 1931	1	11	6
7th November, 1935	3	6	0	16th January, 1936	1	13	0
7th January, 1937	3	9	6	29th April, 1937	1	14	9
25th November, 1937	3	14	0	25th November, 1937	1	16	6
5th January, 1939	3	18	0	5th January, 1939	1	18	0
28th November, 1940	4	4	0	28th November, 1940	2	1	0
26th November, 1941	4	7	0	26th November, 1941	2	3	6
15th October, 1942	4	14	0	15th October, 1942	2	6	2
26th September, 1946	4	18	6	26th September, 1946	2	15	0
7th January, 1947 (*a*)	5	2	0	7th January, 1947	2	17	0
21st August, 1947	5	4	0	21st August, 1947	2	18	0
13th November, 1947	5	6	0	13th November, 1947	2	19	0
7th July, 1948	5	17	0	7th July, 1948	3	6	6

(*a*) Commonwealth rate for metropolitan area adopted.

(v) *Western Australia.* The Industrial Arbitration Act 1912–1941 provides that the Court of Arbitration shall determine and declare a basic wage to operate from 1st July of each year and, wherever and whenever necessary, differential basic rates in special or defined areas of the State. In an amending Act of 1930 provision is made for quarterly adjustments when the Government Statistician reports a variation in the cost of living of 1s. or more per week compared with the previous quarter.

The first declaration of the basic wage by the Court of Arbitration, since the authority to fix one was vested in the Court in 1925, was made on 11th June, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. The variations in the annual declarations of the Court of Arbitration are shown in the following table :—

BASIC WAGE VARIATIONS IN WESTERN AUSTRALIA. (*State Jurisdiction.*)

Date of Operation.	Metropolitan Area.		South-West Land Division (excluding Metropolitan Area).		Other Parts of State.	
	Male.	Female.	Male.	Female.	Male.	Female.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1st July, 1926 ..	4 5 0	2 5 11	4 5 0	2 5 11	4 5 0	2 5 11
,, ,, 1929 ..	4 7 0	2 7 0	4 7 0	2 7 0	*a*4 7 0	*a*2 7 0
,, ,, 1930 ..	4 6 0	2 6 5	4 5 0	2 5 11	4 5 0	2 5 11
,, ,, 1931 ..	3 18 0	2 2 2	3 17 0	2 1 8	3 17 0	2 1 8
,, ,, 1932 ..	3 12 0	1 18 11	3 13 6	1 19 8	3 18 0	2 2 2
,, ,, 1933 ..	3 8 0	1 16 9	3 9 6	1 17 6	3 17 6	2 1 10
,, ,, 1934 ..	3 9 6	1 17 6	3 10 0	1 17 10	3 19 6	2 2 11
,, ,, 1935 ..	3 10 6	1 18 1	3 11 2	1 18 5	4 4 4	2 5 6
,, ,, 1936 ..	3 10 6	1 18 1	3 11 9	1 18 9	4 6 0	2 6 5
,, ,, 1937 ..	3 13 9	1 19 10	3 14 8	2 0 4	4 7 0	2 7 0
,, ,, 1938 ..	4 0 0	2 3 2	4 1 0	2 3 9	4 13 3	2 10 4
,, ,, 1939 ..	4 2 2	2 4 4	4 3 1	2 14 10	4 16 4	2 12 0
,, ,, 1940 ..	4 2 8	2 4 8	4 3 3	2 4 11	4 16 3	2 12 0
,, ,, 1941 ..	4 8 0	2 7 6	4 9 3	2 8 2	5 3 6	2 15 11
,, ,, 1942 ..	4 10 5	2 8 10	4 10 10	2 9 1	5 5 7	2 17 0
,, ,, 1943 ..	4 19 1	2 13 6	4 18 1	2 13 0	5 5 9	2 17 1
,, ,, 1944 ..	4 19 11	2 13 11	4 19 8	2 13 10	5 7 1	2 17 10
,, ,, 1945 ..	5 0 1	2 14 1	4 19 7	2 13 9	5 7 5	2 18 0
,, ,, 1946 ..	5 1 1	2 14 7	5 0 6	2 14 3	5 9 0	2 18 10
26th Feb., 1947 (*b*) ..	5 7 1	2 17 10	5 6 6	2 17 6	5 15 4	3 2 3
1st July, 1947 ..	5 7 10	2 18 3	5 7 3	2 17 11	5 16 0	3 2 8
,, ,, 1948 ..	5 15 9	3 2 6	5 15 2	3 2 2	6 4 9	3 7 4

(*a*) Excludes Gold-fields areas, where rates were the same as those operating from 1st July, 1926.
(*b*) Consequent on "Interim" Basic Wage of Commonwealth Court of December, 1946.

The latest rates payable in accordance with the quarterly adjustments declared by the Court are shown in para. (vi) below.

(vi) *Current State Basic Wage Rates.* In the following table are given the current basic wage rates declared by the various State tribunals which were operative on 1st August, 1948 :—

BASIC WEEKLY WAGE RATES FIXED BY STATE INDUSTRIAL TRIBUNALS.

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate.)
	Males.	Females.		
	£ s. d.	£ s. d.		
New South Wales(*a*)	6 0 0	3 5 0	1.8.48	(*b*)
Victoria(*c*) ..	5 17 0	3 3 0	1 8.48	(*c*)
Queensland(*d*) ..	5 17 0	3 10 6	2 8.48	Man, wife and three children
South Australia ..	5 17 0	3 6 6	7 7.48	,, ,,
Western Australia(*e*)	5 17 5	3 3 5	26 7.48	Man, wife and two children
Tasmania (*c*) ..	5 15 0	3 2 0	1.8.48	(*c*)

(*a*) Sydney, Newcastle, Port Kembla-Wollongong. Broken Hill—males £6 5s., females £3 7s. 6d. Elsewhere, males £5 17s., females £3 3s. (*b*) Commonwealth Basic Wage operative—no defined family unit. (*c*) None declared, but rates shown are those of Commonwealth Court which are followed to a large extent. (*d*) South-Eastern Division. Allowances are added for the following Divisions—Northern, 10s.; North-Western, 17s. 4d.; Mackay, 5s. 6d.; and South-Western, 7s. 4d. Half of these allowances are granted to females. (*e*) Metropolitan Area. Basic wage for Gold-fields areas and portions of State excluding the South-West Land Division—males, £6 5s. 10d.; females, £3 7s. 11d.; South-West Land Division (excluding Metropolitan Area)— males £5 17s. 1d.: females £3 3s. 3d.

6. **Royal Commission on the Basic Wage, 1920.**—Only one comprehensive attempt has been made by the Commonwealth authorities to ascertain specifically what the actual requirements were in the various States according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household in respect of a family consisting of a man, wife and three children under fourteen years of age.

The attempt referred to was made by a Royal Commission which in its report, issued in 1920, recommended the following amounts for the various capital cities :—

	£	s.	d.
Sydney	5	17	1
Melbourne	5	16	6
Brisbane	5	6	2
Adelaide	5	16	1
Perth	5	13	11
Hobart	5	16	11
Six Capitals (Weighted Average)	5	15	8

The recommendations of this Commission were not carried out owing largely to the marked advance of the amounts suggested over ruling rates* and the grave doubts expressed as to the ability of industry to pay such rates.

§ 4. Child Endowment in Australia.

1. **General.**—The principle of supplementing wages by a payment in respect of dependent children under sixteen years of age became prominent in Australia following the recommendations of the Royal Commission on the Basic Wage of 1920, and was implemented in Australia as described in the following paragraphs. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.

2. **New South Wales.**—The first attempt in Australia to institute the system was made in New South Wales in 1919, when a Bill was introduced into the State Parliament to provide a flat basic wage for a man and wife, and an allowance of 5s. per week for each child, the latter rate to be reduced on a sliding scale and to cease automatically when the income reached an amount of £3 per week above the basic wage. The Bill was rejected, but the subject again came up in the Session of 1926–27, when Acts,† which have been amended during subsequent years, provided for the payment of child allowances, in respect of dependent children under the age of fourteen years. The original Act was assented to on 11th April, 1927, and provided for (*a*) the declaration of a basic wage for a man and wife,‡ and (*b*) the payment of an allowance of 5s. per week in respect of each dependent child, subject to the provision that child allowances would be paid only to the extent to which the total earnings of the worker and his family fall short of the sum represented by the *basic wage* plus child allowance at the rate of 5s. per week for each child under the age of fourteen years. Thus, a worker with three dependent children receiving £5 by way of wages would not be entitled to the allowance, but would receive it in respect of a fourth child. These payments in New South Wales operated from 23rd July, 1927. The basic wage was determined for a family unit of a man, wife and one child on 20th December, 1929, and an amending Act, assented to on 23rd December, 1929, excluded one child in each family from endowment. The fund from which child endowment payments were originally made was created by a levy on the wages bill of employers. The rate of tax from employers during the year 1930 was fixed

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* The " Harvester " equivalent for Melbourne at the time (September quarter, 1920) was £4 13s. per week, but only £3 18s. to £4 2s. was being paid on the basis of an annual index-number.

† Family Endowment Act 1927 ; Finance (Family Endowment Tax) Act 1927 ; Industrial Arbitration (Living Wage Declaration) Act 1927 and subsequent amendments.

‡ This was subsequently declared at £4 5s. per week for adult males and £2 6s. per week for adult females. A separate rate for rural employees was declared later at £4 4s. per week.

at 1 per cent. From 1st July, 1931, the rate was fixed at 2 per cent., and from 1st January, 1932, at the rate of 5d. in the £1 on all wages above £3 per week. The levy was discontinued as from 1st January, 1934, the cost of endowment being met from the Special Income and Wages Tax, which was also used for other social services. The scheme was abolished upon the introduction of the National Scheme by the Commonwealth Government in July, 1941.

3. **Commonwealth Public Service.**—The first system of child endowment in Australia was instituted within the Commonwealth Public Service. It came into operation on 1st November, 1920, when, following on the recommendations of the Royal Commission on the Basic Wage,* the Commonwealth Government decided to pay a basic wage of £4 a week in certain cases and child allowances to officers at the rate of 5s. per week for each dependent child under fourteen years of age, with a limitation of salary plus allowance of £400 per annum. As the result of proceedings before the Public Service Arbitrator in 1923, these allowances were confirmed as a permanent part of the salary scheme, and the necessary fund to meet them was created by deducting the average value of the payment from the basic wage of all adult officers. In effect, therefore, the officers themselves provided the fund from which the allowance was paid. The deduction was originally £11 per annum, but later £12. The payment was subsequently limited to officers receiving up to £500 per annum including the allowance. Details regarding the introduction and method of calculating the payments under this scheme have been published in previous issues of the Official Year Book and will be found also in the *Labour Reports* issued by this Bureau. The scheme was abolished at the instance of the officers upon the introduction of the National Scheme by the Commonwealth Government in July, 1941, particulars of which appear below. The deduction of £12 per annum from salaries was consequently discontinued from 10th July, 1941.

4. **National Scheme.**—The Commonwealth Government, in June, 1927, called a conference in Melbourne of the Premiers of the several States to consider the question from a national standpoint. The Prime Minister submitted various estimates of the cost of endowing dependent children under fourteen years of age in Australia at 5s. per week. After discussion, it was decided to refer the matter to a Royal Commission, to be appointed by the Commonwealth Government.

The Commission submitted its report on 15th December, 1928. It was not unanimous in its findings, and the opinions and recommendations of the members were embodied in two separate reports, which dealt exhaustively with the constitutional aspects, existing systems, industrial legislation, the basic wage, standard of living, regulation of wages, working conditions and cognate matters.

At the conference of Commonwealth and State Ministers held in Canberra in May, 1929, the Prime Minister stated that the Commonwealth Government was not prepared to adopt the scheme financed entirely from the proceeds of taxation, as had been recommended in the minority report. The Commonwealth Government agreed with the majority of the Commission that child endowment could not be separated from the control of the basic wage—a power which the Commonwealth did not possess and which the States were not prepared to relinquish. The Government, therefore, did not propose to establish any system of child endowment. It was generally agreed that any scheme which would increase the charges upon industry would be unwise at that particular time. The matter of child endowment was accordingly left to be dealt with as the State Governments should think proper.

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* The Chairman of the Commission (Mr. A. B. Piddington, K.C.), in a supplementary report, had suggested that the wage recommended (£5 16s.) be split up into a flat basic wage of £4 and a Child Endowment of 12s. per week for each dependent child, the fund for the payment of this allowance to be created by a tax on employers of 10s. 9d. per employee per week.

The findings and recommendations in the *majority* and *minority* reports are given in *Labour Report*, No. 19.

In 1941, the Commonwealth Government introduced a scheme of child endowment throughout Australia. The necessary legislation* was introduced into Parliament on 27th March, and finally passed on 3rd April, 1941. The main features of the scheme, which came into operation on 1st July, 1941, are as follows :—

(*a*) Payment at the rate of 7s. 6d. per week (increased from 5s. per week from 26th June, 1945) for all children under the age of sixteen in excess of one child in each family, provided the persons claiming the endowment, and the child in respect of whom the endowment is claimed, have resided in Australia for a period of twelve months preceding the date of claim.

(*b*) The endowment is payable to the mother of the child, or to such persons as are prescribed.

(*c*) Endowment is also payable to approved institutions, not wholly or mainly dependent upon the Commonwealth or a State for their revenue, in respect of all children under 16 years of age maintained therein.

(*d*) The scheme, which formerly was financed partly from Consolidated Revenue, partly from the abolition of the exemptions from taxation in respect of children after the first, and the major part from a tax of 2½ per cent. of all pay-rolls in excess of £20 per week, is now a charge on the National Welfare Fund.

(*e*) The general administration of the Act is under the control of the Director-General of Social Services, and the detailed administration is carried out by Deputy-Directors in each State.

A summary of the operations under the Child Endowment Act from 1st July, 1942 to 30th June, 1947, is given on pp. 300-1 of Chapter VIII. "Public Benevolence, etc.".

Consequent upon the operation of the Commonwealth Child Endowment Scheme, appropriate steps were taken for the termination of the schemes operating in New South Wales and the Commonwealth Public Service.

E. EMPLOYMENT.

§ 1. Employment.

1. **Total Occupied Persons.**—The following estimates of the total numbers of occupied males and females are based principally on data from the Census (June, 1933), the National Register (July, 1939), the Civilian Register (June, 1943) and the Occupation Survey (June, 1945). These sources of information have been supplemented by Pay-roll Tax returns, which commenced in July, 1941.

The estimates in the table below are divided into three categories (*a*) Defence Forces ; (*b*) all persons fully occupied as employers, or as self employed in businesses or on farms ; and (*c*) wage or salary earners fully employed, or occupied as casual, part-time intermittent or seasonal workers. Wage earners unemployed, in the sense that they are incapacitated or have no work to go to, are excluded, as also are persons engaged on Government relief works.

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* Act No. 8, 1941 (Child Endowment Act) as amended by No. 5, 1942, and Nos. 10 and 41, 1945 ; Act No. 2, 1941 (Pay-roll Tax Assessment Act) ; and Act No. 3, 1941 (Pay-roll Tax Act).

All unpaid helpers in non-rural industry have been included with wage and salary earners. Male unpaid helpers in rural industry have been included with employers and workers on own account, as it is considered that the majority of these are sons or other close relatives of farmers working in an unofficial partnership, or as learners with the farm owner. Unpaid female helpers on farms are very numerous, but their exact number is not known. Generally, they combine part-time dairy or other farm work with part-time duties in the home. Together with women occupied in unpaid home duties they have been excluded from the category of occupied persons.

Statistics of net enlistments in the Defence Forces shown in the table below represent total enlistments for full-time duty less deaths and discharges. Prior to December, 1941, men in certain age-groups were called-up for short training courses but these men are excluded from the figures. In July, 1941, the number of such men was approximately 50,000.

TOTAL OCCUPIED PERSONS: AUSTRALIA.

(Thousands.)

Year and Month.	Defence Forces (Net Enlistments).	Employers and Self Employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons including Forces.
		Rural Industry.	Other Industries.	Total.	Rural Industry.	Other Industries.	Total.		
MALES.									
1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	299.0	599.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	282.8(c)	284.0	208.0	492.0	188.0	1,363.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June (a)	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,899.0	2,502.5
1946—June(b) ..	132.0	295.5	282.3	577.8	181.6	1,506.6	1,688.2	2,266.0	2,398.0
Dec.(b) ..	74.9	299.0	301.0	600.0	186.7	1,577.0	1,763.7	2,363.7	2,438.6
FEMALES.						(d)			
1933—June ..	..	15.1	56.2	71.3	4.4	447.5	451.9	523.2	523.2
1939—July ..	..	16.0	62.0	78.0	4.0	561.6	565.6	643.6	643.6
1941—July ..	1.8	14.0	56.8	70.8	6.0	656.2	662.2	733.0	734.8
1943—June ..	44.0	11.7	34.4	46.1	28.1	682.1	710.2	756.3	800.3
1945—June(a)	45.4	17.0	43.1	60.1	23.0	667.1	690.1	750.2	795.6
1946—June(b) ..	11.4	16.0	58.0	74.0	22.0	646.1	668.1	742.1	753.5
Dec.(b) ..	3.7	16.0	61.0	77.0	21.0	660.9	681.9	758.9	762.6
PERSONS.									
1933—June ..	5.8	307.5	304.5	612.0	204.4	1,439.5	1,643.9	2,255.9	2,261.7
1939—July ..	12.9	316.0	361.0	677.0	206.0	1,854.7	2,060.7	2,737.7	2,750.6
1941—July ..	284.6(c)	298.0	264.8	562.8	194.0	2,019.6	2,213.6	2,776.4	3,061.0
1943—June ..	729.0	273.7	184.4	458.1	149.0	1,955.3	2,104.3	2,562.4	3,291.4
1945—June(a)	648.9	304.5	230.2	534.7	153.2	1,961.3	2,114.5	2,649.2	3,298.1
1946—June(b) ..	143.4	311.5	340.3	651.8	203.6	2,152.7	2,356.3	3,008.1	3,151.5
Dec.(b) ..	78.6	315.0	362.0	677.0	207.7	2,237.9	2,445.6	3,122.6	3,201.2

(a) Occupation Survey, 1st June, 1945. (b) Subject to revision. (c) Excludes approximately 50,000 men called up for short training courses. (d) Includes females in thousands, in private domestic service as follows :—106.7 in June, 1933; 124.5 in July, 1939; 100.0 in July, 1941; 41.5 in June, 1943; 47.6 in June, 1945; and 50.1 in June and December, 1946.

From June, 1933 to July, 1939, the number of occupied persons of both sexes had increased by 488,900, due to the increases of 223,700 in the number of available bread-winners and to the decrease of 265,200 in the number unemployed from 563,200 to 298,000.

During the war years from July, 1939 to June, 1943, the number of males occupied as civilians decreased by 288,000, while females occupied as civilians increased by nearly 113,000, representing a net decrease of 175,000 persons. This decrease, together with decrease of unemployment (272,000), normal increase of breadwinners (91,000) and an abnormal war-time increase of 178,000 bread-winners (persons who would not otherwise have been working), balanced the net intake into the Defence Forces at June, 1943 (716,000).

2. **Total Occupied Persons—States.**—The following table shows total occupied males and females in each State in July, 1939, and December, 1946, divided into Defence Forces, Employers and Self Employed, and Wage and Salary Earners.

TOTAL OCCUPIED PERSONS: STATES.

(Thousands.)

State.	Defence Forces (Net Enlistments).		Employers and Self Employed.		Wage and Salary Earners.		Total Occupied Persons, including Forces.	
	July, 1939.	December, 1946.(*a*)	July, 1939.	December, 1946.(*a*)	July, 1939.	December, 1946.(*a*)	July, 1939.	December, 1946.(*a*)
				MALES.				
New South Wales ..	4.9	29.0	216.2	215.6	596.2	710.4	817.3	955.0
Victoria	4.4	23.7	162.9	163.8	399.5	469.8	566.8	657.3
Queensland	1.0	9.0	95.1	97.6	218.6	247.4	314.7	354.0
South Australia ..	1.1	6.2	54.6	54.4	127.7	153.6	183.4	214.2
Western Australia ..	1.0	5.2	47.4	44.8	99.7	114.4	148.1	164.4
Tasmania	0.5	1.8	21.5	22.5	46.9	59.2	68.9	83.5
Australia (*b*) ..	12.9	74.9	599.0	600.0	1,495.1	1,763.7	2,107.0	2,438.6
				FEMALES.				
New South Wales ..	..	1.4	28.4	28.5	220.8	277.8	249.2	307.7
Victoria	..	1.4	25.5	26.2	175.3	202.8	200.8	230.4
Queensland	..	0.3	11.1	10.2	71.2	87.8	82.3	98.3
South Australia ..	..	0.3	6.0	5.2	47.4	53.7	53.4	59.2
Western Australia ..	..	0.3	4.8	4.7	33.2	38.9	38.0	43.9
Tasmania	..	..	2.2	2.1	16.3	18.7	18.5	20.8
Australia (*b*) ..	..	3.7	78.0	77.0	565.6	681.9	643.6	762.6
				PERSONS.				
New South Wales ..	4.9	30.4	244.6	244.1	817.0	988.2	1,066.5	1,262.7
Victoria	4.4	25.1	188.4	190.0	574.8	672.6	767.6	887.7
Queensland	1.0	9.3	106.2	107.8	289.8	335.2	397.0	452.3
South Australia ..	1.1	6.5	60.6	59.6	175.1	207.3	236.8	273.4
Western Australia ..	1.0	5.5	52.2	49.5	132.9	153.3	186.1	208.3
Tasmania	0.5	1.8	23.7	24.6	63.2	77.9	87.4	104.3
Australia (*b*) ..	12.9	78.6	677.0	677.0	2,060.7	2,445.6	2,750.6	3,201.2

(*a*) Estimates for December, 1946, are subject to revision. (*b*) Includes Australian Capital Territory and Northern Territory.

Between July, 1939 and December, 1946, the occupied population of Australia (including Defence Forces but excluding unemployed, pensioners, retired persons of independent means and dependants) increased by approximately 16.4 per cent. The proportionate increase in each State was as follows: New South Wales, 18.4; Victoria, 15.6; Queensland, 13.9; South Australia, 15.4; Western Australia, 11.9; Tasmania, 19.3. The figures for Victoria and Queensland in December, 1946 were adversely affected by industrial disputes and seasonal conditions respectively.

3. Wage and Salary Earners in Employment.—(i) *Commonwealth and States.* Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female domestics in private homes), based on Pay-roll Tax returns and statistics of Commonwealth Government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. It is not possible to obtain actual numbers of farm employees and private domestic servants except when a Census or quasi-Census such as Occupation Survey (1st June, 1945) is taken, but estimates have been made from time to time using available data. The next table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level at November, 1941 (just before the Pacific War commenced and when the number of male wage and salary earners in civilian work, excluding rural, had reached a maximum), and at June of the years 1943 and 1945 to 1947.

WAGE AND SALARY EARNERS IN EMPLOYMENT.

(*Excluding Rural Workers, Domestic Workers in Private Homes, and Persons on Paid Strength of Defence Forces.*)

(Thousands.)

Year and Month.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia. (*a*)
			MALES.				
1933—June	380.6	288.6	139.8	80.5	70.1	29.0	992.0
1939—July	529.9	357.5	172.8	106.7	82.9	37.4	1,293.1
1941—July	547.7	403.4	166.3	118.4	82.3	38.6	1,363.4
November ..	556.8	405.1	168.0	121.9	83.2	39.4	1,381.4
1943—June	525.1	355.2	167.3	110.6	70.4	36.9	1,273.2
1945—June (*b*)	534.1	359.1	168.7	109.8	75.6	39.5	1,294.2
1946—June (*c*)	618.5	417.9	192.4	129.6	93.9	46.9	1,506.5
1947—June (*c*)	671.8	452.6	220.2	140.9	103.9	51.1	1,649.4
			FEMALES.				
1933—June	125.8	118.2	40.5	26.0	20.6	9.1	340.8
1939—July	168.0	142.9	53.2	34.0	26.2	11.6	437.1
1941—July	218.3	186.0	60.5	43.3	31.2	15.2	556.2
November ..	229.3	192.8	62.6	45.6	32.6	15.2	579.8
1943—June	254.4	205.4	74.1	52.9	35.5	16.7	640.7
1945—June (*b*)	247.7	193.8	74.9	48.8	35.6	16.7	619.5
1946—June (*c*)	242.3	183.7	71.2	45.8	34.5	16.6	596.0
1947—June (*c*)	252.1	190.5	74.5	48.0	35.6	16.9	619.6
			PERSONS.				
1933—June	506.4	406.8	180.3	106.5	90.7	38.1	1,332.8
1939—July	697.9	500.4	226.0	140.7	109.1	49.0	1,730.2
1941—July	766.0	589.4	226.8	161.7	113.5	53.8	1,919.6
November ..	786.1	597.9	230.6	167.5	115.8	54.6	1,961.2
1943—June	779.5	560.6	241.4	163.5	105.9	53.6	1,913.9
1945—June (*b*)	781.8	552.9	243.6	158.6	111.2	56.2	1,913.7
1946—June (*c*)	860.8	601.6	263.6	175.4	128.4	63.5	2,102.5
1947—June (*c*)	923.9	643.1	294.7	188.9	139.5	68.0	2,269.0

(*a*) Includes Australian Capital Territory and Northern Territory. (*b*) 1st June, 1945 (Occupation Survey). (*c*) Subject to revision.

Estimates for recent months for Australia, corresponding to the foregoing together with details for certain industrial groups, are published regularly in the *Monthly Review of Business Statistics.*

(ii) *Industrial Groups.* The following table shows the total male and female wage and salary earners in employment (excluding employees in rural industry and female private domestics) subdivided to show the extent of employment provided by Governmental authorities and by private employers respectively. Some principal industrial groups included in the total are shown separately and include both Governmental and private employees, except in the case of retail trade, where there are no Governmental employees.

WAGE AND SALARY EARNERS IN EMPLOYMENT, INDUSTRIAL GROUPS : AUSTRALIA.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, and Persons on Paid Strength of Defence Forces.*)

(Thousands.)

Year and Month.	Total Employment.			Employment in Certain Industrial Groups.				
	Governmental. (*a*)	Private Employers.	Total.	Mining and Quarrying.	Factories.	Transport and Communication.	Retail Trade.	Other Commerce and Finance.
				MALES.				
1933—June	262.2	729.8	992.0	36.3	251.7	164.4	212.2	
1939—July	349.8	943.3	1,293.1	52.2	391.5	185.9	259.7	
1941—November ..	381.5	999.9	1,381.4	54.1	509.8	197.6	102.2	118.3
1943—June	413.3	859.9	1,273.2	45.2	520.7	195.7	71.7	89.3
1945—June (*b*) ..	399.9	894.3	1,294.2	43.4	514.5	209.6	76.3	96.5
1946—June (*c*) ..	435.0	1,071.5	1,506.5	48.8	558.4	237.8	103.2	133.4
Dec. (*c*) ..	456.6	1,120.4	1,577.0	50.5	561.0	250.7	115.7	145.8
1947—June (*c*) ..	472.0	1,177.4	1,649.4	51.0	595.1	256.4	116.0	151.9
				FEMALES.				
1933—June	46.5	294.3	340.8	0.2	103.1	11.1	87.3	
1939—July	55.2	381.9	437.1	0.3	148.2	12.6	114.9	
1941—November ..	76.3	503.5	579.8	0.5	198.2	22.1	106.4	47.7
1943—June	135.9	504.8	640.7	0.6	228.6	34.6	98.5	52.6
1945—June (*b*) ..	125.4	494.1	619.5	0.4	206.3	36.5	95.9	52.5
1946—June (*c*) ..	94.0	502.0	596.0	0.5	192.1	32.4	99.6	50.8
Dec. (*c*) ..	89.5	521.3	610.8	0.5	194.4	31.8	108.7	51.6
1947—June (*c*) ..	92.1	527.5	619.6	0.5	200.6	32.4	104.0	53.0
				PERSONS.				
1933—June	308.7	1,024.1	1,332.8	36.5	354.8	175.5	999.5	
1939—July	405.0	1,325.2	1,730.2	52.5	539.7	198.5	274.6	
1941—November ..	457.8	1,503.4	1,961.2	54.6	708.0	219.7	208.6	166.0
1943—June	549.2	1,364.7	1,913.9	45.8	749.3	230.3	170.2	141.9
1945—June (*b*) ..	525.3	1,388.4	1,913.7	43.8	720.8	246.1	172.2	149.0
1946—June (*c*) ..	529.0	1,573.5	2,102.5	49.3	750.5	270.2	202.8	184.2
Dec. (*c*) ..	546.1	1,641.7	2,187.8	51.0	755.4	282.5	224.4	197 4
1947—June (*c*) ..	564.1	1,704.9	2,269.0	51.5	795.7	288.8	220 0	204 9

(*a*) Includes employees of Australian Government Authorities (Commonwealth, State and Local) and of Allied Governments. (*b*) 1st June, 1945 (Occupation Survey). (*c*) Subject to revision.

4. **Employment in Factories.**—Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the *Production Bulletin* issued by this Bureau. Estimated employment in each State in later months, subject to revision, may be obtained from the *Monthly Review of Business Statistics.*

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that in 1946–47 factory employment was 47 per cent. higher than the average employment for the three years ended 1938–39.

5. Index of Employment in Retail Stores.—Indexes for Australia and each State are published in the *Monthly Review of Business Statistics* and are based on Pay-roll Tax returns, which commenced in July, 1941.

The index shows that in Australia in June, 1947, employment in retail stores was 9 per cent. higher than in July, 1941.

6. Seasonal Employment in Australia.—An investigation concerning the extent of seasonal employment in Australia was made during 1928 and the results were published in the Official Year Book, No. 22, and in *Labour Report*, No. 19.

§ 2. Unemployment.

1. Total Persons Unemployed.—The total number of persons unemployed has been recorded only at the dates of the various censuses. The Census records include all persons who state that they are unemployed, and distinguish between unemployment on account of sickness, accident, scarcity of work, industrial dispute, and all other causes combined. The following table sets out the number of unemployed at the Censuses of 1911, 1921 and 1933, the National Register, 1939, the Civilian Register, 1943, and the Occupation Survey, 1945, and estimates have been inserted for June and December, 1946. The percentage which the unemployed bore at each time to all wage and salary earners of the same sex, comprising those estimated to be in employment and those unemployed is also shown. Of the total wage and salary earners shown below as being unemployed at the Census of 30th June, 1933, 1.4 per cent. was on account of sickness and accident.

UNEMPLOYMENT (ALL CAUSES): AUSTRALIA.

Year and Month.	Wage and Salary Earners Unemployed.			Percentage of Wage and Salary Earners Unemployed.		
	Males.	Females.	Total.	Males.	Females.	Total.
	'000.	'000.	'000.	%	%	%
1911—April (Census)	48.0	8.3	56.3	4.3	2.7	4.0
1921—April ,,	139.4	21.5	160.9	10.7	5.7	9.6
1933—June (*a*) ,,	460.2	103.1	563.3	27.9	19.1	25.8
1939—July (*b*) ..	264.0	34.0	298.0	15.0	5.7	12.6
1943—June (*c*) ..	19.5	6.3	25.8	1.4	0.9	1.2
1945—June (*d*) ..	39.9	16.2	56.1	2.7	2.3	2.6
1946—June (*e*) ..	109.0	25.0	134.0	6.1	3.6	5.4
December (*e*) ..	66.4	16.3	82.7	3.6	2.4	3.3

(*a*) The figures shown for 1933 are in excess of those actually recorded at the Census through an allowance having been made for a number of youths and girls who would normally have been wage and salary earners, but who, on account of the economic depression, having never been employed, were not classed as wage and salary earners. (*b*) Derived from National Register, 1939. (*c*) Derived from Civilian Register, 1943. *See* comment below. (*d*) Derived from Occupation Survey, 1945. (*e*) Estimate subject to revision.

The estimates and percentages of unemployment given above for periods subsequent to the Census of 1933 should be interpreted in conjunction with the notes below.

The estimates for 1939 were based on the National Register, which covered males aged 18–64 years, and data available from other sources. Owing to the absence of specific definition of an unemployed person on the Civil Registration card used in 1943, and use on the Occupation Survey (1945) card of the definition "a person normally working for wages but without a job on 1st June", it appears that the 1943 and 1945 figures exclude some persons who were temporarily absent from their jobs at the dates of the surveys.

The proportion of wage earners unemployed in July, 1939, immediately prior to the 1939–45 War, was estimated at approximately 12½ per cent. In July, 1941, it was about 4 per cent. and by June, 1943, under conditions of intensive mobilization of manpower for war purposes involuntary unemployment was practically nil. After August, 1945, considerable numbers of ex-Service personnel were idle prior to resuming civil employment. These persons were included in the estimates of numbers unemployed.

2. **Unemployment of Members of Trade Unions.**—(i) *General.* The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions regularly reporting exceeds 690,000, consisting predominantly of males and representing about 56 per cent. of the total trade union membership, and between 20 and 25 per cent. of all wage and salary earners. Unemployment returns are not collected from unions whose members are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since 1st January, 1913. The quarterly figures relate to persons who were out of work for three days or more during a specified week in each quarter: they include persons out of work through sickness but exclude persons out of work through strikes and lock-outs, except those outside the industry who are indirectly affected. The yearly figures quoted represent the average of the four quarters.

The value of the percentages of unemployment derived from trade union returns is in the indication they give of the trend of unemployment among trade unionists as reported by secretaries of trade unions.

(ii) *Summary for Australia,* 1939 *to* 1946. The following table gives a summary for Australia for the years 1939 and 1941 to 1946 and quarterly for the years 1939 and 1944 to 1946. Particulars of unemployment percentages at intervals since 1911 will be found on page 512 :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS: AUSTRALIA.

Period.	Unions.	Membership.	Unemployed.	
			Number.	Percentage.
1939 Year	396	476,918	45,967	9.7
1941 "	395	536,660	20,013	3.7
1942 "	394	613,534	9,754	1.6
1943 "	390	678,713	7,545	1.1
1944 "	389	681,684	8,073	1.2
1945 "	388	673,750	7,864	1.2
1946 "	383	672,121	9,125	1.4
1939 March Quarter ..	395	474,277	45,545	9.6
June " ..	398	477,149	45,183	9.5
September " ..	397	478,000	48,888	10.2
December " ..	392	478,245	44,253	9.3
1944 March " ..	390	688,381	6,987	1.0
June " ..	389	683,463	9,433	1.4
September " ..	389	680,218	7,947	1.1
December " ..	389	674,695	7,925	1.2
1945 March " ..	388	683,632	7,616	1.1
June " ..	388	679,227	7,795	1.1
September " ..	387	668,674	7,769	1.2
December " ..	387	663,467	8,276	1.2
1946 March " ..	385	662,296	9,062	1.4
June " ..	385	661,432	8,757	1.3
September " ..	381	672,209	9,212	1.4
December " ..	381	692,546	9,468	1.4

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the *Labour Reports.* The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures, the average of the four quarters; the returns do not include persons out of work through strikes or lock-outs, except those outside the industry concerned who are indirectly affected.

The highest percentage of unemployed yet recorded (30.0) was reached in the quarter ended June, 1932.

(iii) *Australia, Industrial Groups,* 1945 *and* 1946. Below are shown the percentages unemployed in industrial groups. Industries or occupations in which employment is stable, such as railways, and those which are subject to exceptional fluctuations, such as wharf labour, agricultural, pastoral, etc., are not included. Other occupations—domestic, hotel employees, etc.—are included in the "Other and Miscellaneous" group. as their returns are not sufficiently representative :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS IN INDUSTRIAL GROUPS : AUSTRALIA.

Industrial Group.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Percentage.	
	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.
Manufacturing—								
I. Wood, Furniture, etc. ..	16	16	17,589	19,448	135	152	0.8	0.8
II. Engineering, Metal Works, etc.	61	59	204,755	190.497	1,771	1,434	0.9	0.7
III. Food, Drink. Tobacco, etc. ..	54	54	40,825	42,738	937	1,088	2.3	2.5
IV. Clothing, Textiles, etc. ..	22	22	57.126	57.635	487	772	0.9	1.3
V. Books, Printing, etc. ..	12	12	24.699	26,515	101	117	0.4	0.5
VI. Other Manufacturing ..	64	62	57,837	50,067	1,175	1,324	2.1	2.7
VII. Building	46	46	57,074	60.719	814	1,106	1.4	1.8
VIII. Mining, Quarrying, etc. ..	22	22	28,111	28,306	887	893	3.2	3.2
X. Land Transport other than Railway and Tramway Services	13	13	24,489	29,169	611	490	2.5	1.7
IX., XI., XII., XIII., and XIV. Other and Miscellaneous ..	78	77	161,245	167,027	946	1,749	0.6	1.0
All Groups	388	383	673,750	672,121	7,864	9,125	1.2	1.4

(iv) *States,* 1945 *and* 1946. In making interstate comparisons of unemployment percentages, allowances must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States, and that for some States the returns are a more representative sample than for others. The State percentages shown below, therefore, should not be read as indicating the relative degree of unemployment amongst unionists in the individual States but as an indication of the trend of unemployment as reported by the trade unions.

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS.

State.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Percentage.	
	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.
New South Wales	110	109	287,842	284,514	4,328	4,319	1.5	1.5
Victoria	77	75	186,112	191,632	1,548	2,400	0.9	1.2
Queensland	45	45	90,066	87.006	634	768	0.7	0.9
South Australia	55	54	59,368	56,628	771	755	1.3	1.4
Western Australia	67	66	35.371	37 372	426	584	1.2	1.5
Tasmania	34	34	14,991	14,969	157	299	1.0	2.0
Australia..	388	383	673,750	672,121	7,864	9,125	1.2	1.4

(v) *States*, 1939 *to* 1946. The following table gives the percentages in each State for 1939 and from 1941 to 1946 :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS : PERCENTAGES.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	%	%	%	%	%	%	%
1939 Year ..	11.0	10.4	5.9	9.3	7.1	8.1	9.7
1941 ,, ..	4.7	2.5	4.5	2.7	2.9	3.3	3.7
1942 ,, ..	1.8	1.2	2.3	1.1	1.6	0.8	1.6
1943 ,, ..	1.4	0.7	1.2	0.9	1.5	1.3	1.1
1944 ,, ..	1.6	0.8	0.7	1.0	1.5	0.8	1.2
1945 ,, ..	1.5	0.9	0.7	1.3	1.2	1.0	1.2
1946 ,, ..	1.5	1.2	0.9	1.4	1.5	2.0	1.4
1939 March Quarter	10.6	10.8	6.1	9.3	7.3	7.6	9.6
June ,, ..	10.6	10.4	5.7	9.5	6.2	9.4	9.5
Sept. ,, ..	11.6	11.2	5.8	9.4	8.2	8.3	10.2
Dec. ,, ..	11.1	9.0	5.8	9.1	6.6	7.1	9.3
1944 March ,, ..	1.3	0.7	0.8	0.9	1.5	0.7	1.0
June ,, ..	1.9	0.9	0.7	1.3	1.9	0.7	1.4
Sept. ,, ..	1.6	0.8	0.8	0.9	1.2	0.9	1.2
Dec. ,, ..	1.6	0.9	0.6	0.9	1.2	0.7	1.2
1945 March ,, ..	1.5	0.8	0.5	1.2	1.0	0.7	1.1
June ,, ..	1.5	0.8	0.6	1.5	1.1	0.8	1.1
Sept. ,, ..	1.5	0.8	0.9	1.2	1.2	1.1	1.2
Dec. ,, ..	1.5	1.0	0.8	1.3	1.5	1.6	1.2
1946 March ,, ..	1.5	1.3	0.8	1.6	1.5	1.7	1.4
June ,, ..	1.6	1.1	0.9	1.4	1.6	1.6	1.3
Sept. ,, ..	1.5	1.3	0.8	1.3	1.5	2.3	1.4
Dec. ,, ..	1.5	1.3	1.0	1.1	1.6	2.3	1.4

3. **Special Legislation for the Relief of Unemployment.**—The position in regard to unemployment in Australia became so serious during 1930 that the usual methods of providing funds for relief works and sustenance were found to be inadequate. The cessation of loans, and the general depression in industry and business, due mainly to the decline in the prices of primary products, brought about an economic crisis in all States. The number of persons thrown out of work increased rapidly with little prospect of conditions improving during the immediate future. The Commonwealth and State Governments realized that special action was necessary to provide additional funds to relieve the distress caused by continued unemployment, as the money ordinarily available was not sufficient to meet the abnormal conditions.

Special grants to the States were made by the Commonwealth Government, while special legislation relating to the relief of unemployment was enacted in practically all the States. In New South Wales, Victoria and Queensland, the Acts provided for special taxation for the purpose of creating funds for relief works and sustenance for the unemployed. The funds necessary for the relief of unemployment in South Australia, Western Australia and Tasmania were provided from revenue.

Further references to the special legislation relating to unemployment, rates of tax and sustenance payments will be found in *Labour Reports*, Nos. 22 to 31.

§ 3. Commonwealth Employment Service.

The Commonwealth Employment Service was established under Section 47 of the Re-establishment and Employment Act of 1945, and under the Social Services Legislation Declaratory Act 1947.

The principal function of this Service, as set out in Section 48 of the first-mentioned Act, is to provide services and facilities in relation to employment for the benefit of persons seeking to become employed, to change employment, or to engage labour, and to provide facilities to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth. The Act also gives the Service a number of specific functions in relation to the re-establishment of ex-servicemen and war workers.

The Service also assists in the administration of the Unemployment and Sickness Benefits. provided under the Social Services Consolidation Act 1947, as well as the Re-Employment Allowance. provided under the Re-Establishment and Employment Act for certain classes of discharged members of the Forces. All persons who wish to claim unemployment benefits or re-employment allowances must register with their residential Employment Office which is responsible for checking the claim and arranging for payment of benefit, if appropriate, and if no suitable employment can be offered to the applicant.

The Service functions within the Employment Division of the Department of Labour and National Service, and is under the control of a Director of Employment. It functions on a decentralized basis. The Central Office is in Sydney, and there are State Head Offices in each of the capital cities, with 153 District Employment Offices in suburban and the larger provincial centres, and with some 500 agents in the smaller country centres who are responsible to the various District Employment Offices. The District Offices are distributed as follows :—New South Wales, 57 ; Victoria, 39 ; Queensland, 22 ; South Australia, 15 ; Western Australia, 15 ; Tasmania, 5.

The Service completed its first year of operation in May, 1947, and monthly average statistics of the principal items of business transacted during that period were as follows :—applicants for employment—new registrations 39,536, referred to employers 28,146, placed in employment 17,381 ; vacancies—new notifications 29,848, unfilled at end of month 57,696 ; Persons receiving advice or information 44,635 ; and discharges (ex-Service) dealt with 12,436.

§ 4. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work are given in previous issues of the Official Year Book, and also in the annual *Labour Reports* of this Bureau.

In *annual* tabulations particulars are included of all disputes which either *commenced* or were *current* during the year under review. As regards " number of disputes ", " establishments involved ", and " workpeople involved ". therefore, duplication will take place in respect of those disputes which started in and were unsettled at the end of a preceding year; the number involved will, however, be indicated in a footnote, to permit of due allowance being made in any calculations made from the tables.

2. **Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1945 and 1946.**—The following tables give particulars of industrial disputes which either commenced or were current during 1945 and 1946, classified according to industrial groups.

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS, 1945.

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	NEW SOUTH WALES.							£
II.	Engineering, metal works, etc.	55	59	22,453	1,467	23,920	784,381	880,604
III.	Food, drink, etc.	25	25	8,066	68	8,134	46,520	48,300
IV.	Clothing, textiles, etc. ..	2	2	454	..	454	2,776	2,100
V.	Books, printing, etc. ..	4	113	3,218	18	3,236	154,964	185,056
VI.	Other manufacturing ..	17	51	8,156	287	8,443	115,221	116,560
VII.	Building	2	3	201	..	201	806	1,047
VIII.	(a) Coal-mining	684	857	178,219	13,459	191,678	593,782	884,664
	(b) Other mining, quarries, etc.	3	3	1,350	174	1,524	22,677	38,852
IX.	Railway and tramway services	16	16	6,641	..	6,641	7,018	7,343
X.	Other land transport ..	1	1	130	..	130	130	150
XI.	Shipping, wharf labour, etc. ..	29	29	16,249	..	16,249	57,861	71,783
XII.	Pastoral, agricultural, etc. ..	2	32	200	..	200	3,470	3,540
XIII.	Domestic, hotels, etc. ..	1	1	12	..	12	216	150
XIV.	Miscellaneous	4	9	937	..	937	3,035	1,031
	Total	845	1,201	246,286	15,473	261,759	1,792,857	2,241,180
	VICTORIA.							
II.	Engineering, metal works, etc.	11	11	447	..	447	3,645	4,400
III.	Food, drink, etc.	10	10	1,027	..	1,027	13,903	12,156
IV.	Clothing, textiles, etc. ..	4	4	533	..	533	1,822	1,591
VI.	Other manufacturing ..	3	3	64	65	129	1,032	998
IX.	Railway and tramway services	1	1	23,939	..	23,939	23,939	23,152
X.	Other land transport ..	2	2	3,015	..	3,015	6,010	6,531
XI.	Shipping, wharf labour, etc. ..	3	3	137	..	137	857	800
	Total	34	34	29,162	65	29,227	51,208	49,628
	QUEENSLAND.							
I.	Wood, furniture, etc. ..	1	250	4,000	..	4,000	68,000	70,000
II.	Engineering, metal works, etc.	1	60	3,500	..	3,500	3,500	3,500
III.	Food, drink, etc.	5	9	1,222	..	1,222	14,494	14,133
VI.	Other manufacturing ..	2	2	119	..	119	321	523
VIII.	(a) Coal-mining	5	10	1,023	..	1,023	7,490	11,167
IX.	Railway and tramway services	6	6	2,454	99	2,553	20,445	23,350
XI.	Shipping, wharf labour, etc. ..	3	3	1,653	..	1,653	3,431	3,536
XII.	Pastoral, agricultural, etc. ..	1	20	1,500	..	1,500	90,000	80,000
XIV.	Miscellaneous	3	3	173	..	173	322	274
	Total	27	363	15,644	99	15,743	208,003	206,483
	SOUTH AUSTRALIA.							
II.	Engineering, metal works, etc.	3	4	129	16	145	2,386	2,297
III.	Food, drink, etc.	1	1	93	..	93	93	45
VI.	Other manufacturing ..	1	1	178	..	178	1,246	1,200
VII.	Building	1	1	150	..	150	375	400
VIII.	(a) Coal-mining	1	1	22	..	22	66	72
IX.	Railway and tramway services	2	2	1,337	..	1,337	3,786	3,595
X.	Other land transport ..	1	1	1,806	..	1,806	19,866	19,000
XI.	Shipping, wharf labour, etc. ..	2	2	82	..	82	1,052	1,140
XIII.	Domestic, hotels, etc. ..	1	1	22	..	22	44	19
	Total	13	14	3,819	16	3,835	28,914	27,768
	WESTERN AUSTRALIA.							
I.	Wood, furniture, etc. ..	1	1	131	..	131	164	190
II.	Engineering, metal works, etc.	2	3	183	..	183	896	1,036
III.	Food, drink, etc.	1	1	12	..	12	30	30
IV.	Clothing, textiles, etc. ..	2	8	402	..	402	9,162	8,145
VI.	Other manufacturing ..	2	2	127	..	127	715	750
VIII.	(a) Coal-mining	3	5	1,439	644	2,083	9,974	11,760
	(b) Other mining, quarries, etc.	1	1	548	..	548	1,644	1,666
IX.	Railway and tramway services	2	2	211	..	211	251	259
XI.	Shipping, wharf labour, etc. ..	2	2	105	..	105	9,655	11,403
	Total	16	25	3,158	644	3,802	32,491	35,239

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS, 1945—*continued.*

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	TASMANIA.							£
I.	Wood, furniture, etc. ..	3	3	43	..	43	293	310
III.	Food, drink, etc.	1	1	52	..	52	156	210
VI.	Other manufacturing ..	2	2	303	..	303	606	643
XI.	Shipping, wharf labour, etc. ..	4	5	1,174	..	1,174	5,113	5,983
	Total	10	11	1,572	..	1,572	6,168	7,146
	AUSTRALIA.							
I.	Wood, furniture, etc. ..	5	254	4,174	..	4,174	68,457	70,500
II.	Engineering, metal works, etc.	72	137	26,712	1,483	28,195	794,808	891,837
III.	Food, drink, etc.	43	47	10,472	68	10,540	75,196	74,874
IV.	Clothing, textiles, etc. ..	8	14	1,389	..	1,389	13,760	11,836
V.	Books, printing, etc. ..	4	113	3,218	18	3,236	154,964	185,056
VI.	Other manufacturing ..	27	61	8,947	352	9,299	119,141	120,674
VII.	Building	3	4	351	..	351	1,181	1,447
VIII.	(a) Coal-mining	693	875	180,703	14,103	194,806	611,312	907,663
	(b) Other mining, quarries, etc.	4	4	1,898	174	2,072	24,321	40,518
IX.	Railway and tramway services	27	27	34,582	99	34,681	55,439	57,699
X.	Other land transport ..	4	4	4,951	..	4,951	26,006	25,681
XI.	Shipping, wharf labour, etc. ..	43	44	19,400	..	19,400	77,969	94,645
XII.	Pastoral, agricultural, etc. ..	3	52	1,700	..	1,700	93,470	83,540
XIII.	Domestic, hotels, etc. ..	2	2	34	..	34	260	169
XIV.	Miscellaneous	7	10	1,110	..	1,110	3,357	1,305
	Total (a)	945	1,648	299,641	16,297	315,938	2,119,641	2,567,444

(a) The following disputes commenced in and were uncompleted at the end of the year 1944, and in respect of "Number of Disputes", "Establishments Involved" and "Workpeople Involved" are duplicated in the figures for 1945.

State.	Number of Disputes.	Establishments Involved.	Number of Workpeople Involved.		
			Directly.	Indirectly.	Total.
Victoria	1	1	24	..	24
South Australia	1	1	20	..	20
Western Australia	1	1	1,140	..	1,140

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS, 1946.

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	NEW SOUTH WALES.							£
II.	Engineering, metal works, etc.	26	328	24,835	2,045	26,880	206,555	242,183
III.	Food, drink, etc.	11	68	2,968	81	3,049	33,590	39,408
IV.	Clothing, textiles, etc. ..	2	5	607	..	607	15,089	13,144
VI.	Other manufacturing ..	10	73	5,529	..	5,529	22,359	26,038
VII.	Building	1	1	28	..	28	896	1,000
VIII.	(a) Coal-mining	682	729	153,796	6,922	160,718	297,316	454,602
	(b) Other mining, quarries, etc.	2	2	660	..	660	3,300	4,025
IX.	Railway and tramway services	8	9	9,576	..	9,576	12,350	13 565
XI.	Shipping, wharf labour, etc. ..	21	161	21,250	..	21,250	125,876	145,566
XIII.	Domestic, hotels, etc. ..	1	1	35	..	35	315	300
XIV.	Miscellaneous	7	12	1,168	..	1,168	1,911	2,152
	Total	771	1,389	220,452	9,048	229,500	719,557	941,983
	VICTORIA.							
II.	Engineering, metal works, etc.	6	95	2,014	1,807	3,821	186,619	187,158
III.	Food, drinks, etc.	7	8	840	175	1,015	3,886	3,923
IV.	Clothing, textiles, etc. ..	2	2	89	..	89	3,503	3,066
V.	Books, printing, etc. ..	1	3	275	..	275	725	797
VI.	Other manufacturing ..	4	12	1,789	76	1,865	26,816	29,652
VII.	Building	4	4	96	..	96	2,796	3,160
IX.	Railway and tramway services	5	6	62,446	542	62,988	244,251	274,897
XI.	Shipping, wharf labour, etc. ..	5	56	6,268	..	6,268	37,894	40,102
XIV.	Miscellaneous	1	140	400	..	400	800	900
	Total	35	326	74,217	2,600	76,817	507,290	543,655

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS, 1946—*continued.*

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	QUEENSLAND.							£
III.	Food, drink, etc.	10	23	9,068	20	9,088	474,245	515,944
VI.	Other manufacturing ..	1	1	60	..	60	300	330
VIII.	(*a*) Coal-mining	1	12	3,000	..	3,000	51,000	76,000
IX.	Railway and tramway services	2	2	2,543	70	2,613	30,256	31,746
XI.	Shipping, wharf labour, etc. ..	8	52	8,651	..	8,651	57,888	70,433
	Total	22	90	23,322	90	23,412	613,680	694,453
	SOUTH AUSTRALIA.							
I.	Wood, furniture, etc. ..	1	1	116	..	116	232	228
II.	Engineering, metal works, etc.	1	1	70	1,270	1,340	1,550	1,720
III.	Food, drink, etc.	1	1	42	..	42	126	130
VI.	Other manufacturing ..	4	4	813	..	813	17,016	17,634
IX.	Railway and tramway services	2	2	5,395	..	5,395	5,395	5,030
XI.	Shipping, wharf labour, etc. ..	8	23	2,477	16	2,493	4,611	6,703
XIV.	Miscellaneous	1	1	28	..	28	84	80
	Total	18	33	8,941	1,286	10,227	29,014	31,525
	WESTERN AUSTRALIA.							
I.	Wood, furniture, etc. ..	1	1	140	..	140	480	500
II.	Engineering, metal works, etc.	1	1	87	..	87	87	129
III.	Food, drink, etc.	1	1	336	..	336	486	538
VIII.	(*a*) Coal-mining	1	3	236	..	236	2,050	2,600
	(*b*) Other mining, quarries, etc.	1	1	9	..	9	270	500
IX.	Railway and tramway services	2	2	1,357	3,659	5,016	64,548	62,044
XI	Shipping, wharf labour, etc. ..	3	8	459	..	459	1,313	1,518
XIV.	Miscellaneous	1	1	80	..	80	100	500
	Total	11	18	2,704	3,659	6,363	69,634	68,329
	TASMANIA.							
VI.	Other manufacturing ..	1	1	63	..	63	126	115
IX.	Railway and tramway services	1	1	322	..	322	1,610	1,460
XI.	Shipping, wharf labour, etc. ..	5	12	1,250	..	1,250	4,070	4,881
XII.	Pastoral, agricultural, etc. ..	1	1	40	..	40	840	600
	Total	8	15	1,675	..	1,675	6,646	7,056
	NORTHERN TERRITORY.							
VII.	Building	1	1	430	..	430	1,860	2,960
IX.	Railway and tramway services	1	1	97	..	97	97	140
	Total	2	2	527	..	527	1,957	3,100
	AUSTRALIAN CAPITAL TERRITORY.							
III.	Food, drink, etc.	1	8	10	..	10	40	46
XIII.	Domestic, hotels, etc. ..	1	1	17	..	17	17	..
	Total	2	9	27	..	27	57	46
	AUSTRALIA.							
I.	Wood, furniture, etc. ..	2	2	256	..	256	712	728
II.	Engineering, metal works, etc.	34	425	27,006	5,122	32,128	394,811	431,190
III.	Food, drink, etc.	31	109	13,264	276	13,540	512,373	550,089
IV.	Clothing, textiles, etc. ..	4	7	696	..	696	18,592	16,210
V.	Books, printing, etc. ..	1	3	275	..	275	725	797
VI.	Other manufacturing ..	20	91	8,254	76	8,330	66,617	73,769
VII.	Building	6	6	554	..	554	5,552	7,120
VIII.	(*a*) Coal-mining	684	744	157,032	6,922	163,954	350,366	533,202
	(*b*) Other mining, quarries, etc.	3	3	669	..	669	3,570	4,525
IX.	Railway and tramway services	21	23	81,736	4,271	86,007	358,507	388,882
XI.	Shipping, wharf labour, etc. ..	50	312	40,355	16	40,371	231,652	269,203
XII.	Pastoral, agricultural, etc. ..	1	1	40	..	40	840	600
XIII.	Domestic, hotels, etc. ..	2	2	52	..	52	332	300
XIV.	Miscellaneous	10	154	1,676	..	1,676	3,195	3,632
	Total (*a*)	869	1,882	331,865	16,683	348,548	1,917,844	2,290,147

(*a*) The following disputes commenced in, and were uncompleted at the end of the year 1945, and in respect of "Number of Disputes", "Establishments Involved" and "Workpeople Involved" are duplicated in the figures for 1946.

State.	Number of Disputes.	Establishments Involved.	Number of Workpeople Involved.		
			Directly.	Indirectly.	Total.
New South Wales	3	3	610	226	836
Victoria	1	1	31	..	31

3. **Industrial Disputes, Australia, 1939 to 1946.**—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each of the years 1939 and 1941 to 1946, classified according to industrial groups.

Satisfactory comparisons of the frequency of industrial disputes in classified industries can be made only after omitting those which are recorded for coal-mining (Group VIII.(*a*)). For 1913 the proportion of disputes in the mining industry represented practically 50 per cent. of the total number recorded. In subsequent years the proportion remained high, ranging from 45 per cent. in 1917 and 1918 to as much as 82 in 1940. For the years 1945 and 1946 these disputes represented 73 and 79 per cent. respectively of the annual total. In the five years 1942 to 1946 working days lost through dislocations involving workpeople engaged in coal-mining amounted to 1,855,056, representing 29 per cent. of the total loss of working days during the period :—

INDUSTRIAL DISPUTES : AUSTRALIA.

Year.	Manufacturing. (Groups I. to VI.)	Building. (Group VII.)	Mining. (Group VIII.)		Transport, Land and Sea. (Groups IX. to XI.)	Miscellaneous. (Groups XII. to XIV.)	ALL GROUPS.
			Coal-mining.	Other Mining, etc.			
			NUMBER.				
1939.. ..	20	3	362	4	6	21	416
1941.. ..	135	12	395	4	18	3	567
1942.. ..	120	13	447	1	12	9	602
1943.. ..	179	13	550	4	22	17	785
1944.. ..	199	11	660	8	40	23	941
1945.. ..	159	3	693	4	74	12	945
1946.. ..	92	6	684	3	71	13	869
			WORKPEOPLE INVOLVED.				
1939.. ..	8,818	57	137,792	900	2,017	3,246	152,830
1941.. ..	96,999	2,294	141,235	2,266	5,188	125	248,107
1942.. ..	47,689	1,900	112,031	306	6,468	869	169,263
1943.. ..	106,943	19,976	148,649	1,865	12,293	6,377	296,103
1944.. ..	65,629	1,494	158,838	6,452	36,473	7,472	276,358
1945.. ..	56,833	351	194,806	2,072	59,032	2,844	315,938
1946.. ..	55,225	554	163,954	669	126,378	1,768	348,548
			WORKING DAYS LOST.				
1939.. ..	108,709	563	291,067	3,805	35,016	19,994	459,154
1941.. ..	647,730	18,123	275,605	12,882	29,711	123	984,174
1942.. ..	187,049	6,450	177,565	1,224	3,924	1,983	378,195
1943.. ..	407,524	125,247	326,231	39,764	79,529	11,856	990,151
1944.. ..	340,604	21,204	389,582	60,486	74,913	25,963	912,752
1945.. ..	1,226,326	1,181	611,312	24,321	159,414	97,087	2,119,641
1946.. ..	993,830	5,552	350,366	3,570	590,159	4,367	1,947,844
			ESTIMATED LOSS IN WAGES.				
	£	£	£	£	£	£	£
1939.. ..	83,540	424	335,033	4,728	22,114	9,877	455,716
1941.. ..	616,621	20,238	320,945	15,381	26,795	122	1,000,102
1942.. ..	179,880	7,193	260,868	1,400	5,289	1,460	456,090
1943.. ..	385,848	149,344	480,008	46,900	82,941	8,465	1,153,506
1944.. ..	347,656	23,129	576,360	64,709	79,425	20,450	1,111,729
1945.. ..	1,354,777	1,447	907,663	40,518	178,025	85,014	2,567,444
1946.. ..	1,082,683	7,120	533,202	4,525	658,085	4,532	2,290,147

4. **Summary of Disputes (involving Stoppage of Work), 1939 to 1946.**—The following table gives particulars of the number of industrial disputes in each State in the years 1939 and 1941 to 1946 together with the workpeople involved, the working days lost, and the estimated loss in wages:—

INDUSTRIAL DISPUTES: SUMMARY.

State or Territory.	Year.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		£
New South Wales	1939	386	460	139,301	9,230	148,531	410,183	419,330
	1941	513	773	213,440	6,671	220,111	778,079	809,879
	1942	552	573	148,203	2,892	151,095	320,135	401,613
	1943	689	2,771	250,754	5,623	256,377	796,511	971,069
	1944	801	921	213,007	8,175	221,182	575,305	760,380
	1945	845	1,201	246,286	15,473	261,759	1,792,857	2,241,180
	1946	771	1,389	220,452	9,048	229,500	719,557	941,983
Victoria	1939	10	10	1,989	180	2,169	27,313	19,946
	1941	22	595	19,806	311	20,117	139,167	121,193
	1942	20	26	11,979	140	12,119	35,658	31,009
	1943	40	1,070	19,042	217	19,259	76,686	65,409
	1944	53	89	13,348	294	13,642	72,618	73,223
	1945	34	34	29,162	65	29,227	51,208	49,628
	1946	35	326	74,217	2,600	76,817	507,200	543,655
Queensland	1939	5	6	373	2	375	1,870	1,753
	1941	17	113	3,392	280	3,672	47,826	48,574
	1942	6	6	370	52	422	2,702	2,145
	1943	20	114	8,990	302	9,292	58,895	62,629
	1944	23	32	8,493	..	8,493	63,084	67,401
	1945	27	363	15,644	99	15,743	208,003	206,483
	1946	22	90	23,322	90	23,412	613,689	694,453
South Australia ..	1939	2	2	170	5	175	1,880	1,416
	1941	11	51	3,704	..	3,704	17,656	18,70
	1942	13	52	3,617	..	3,617	10,494	11,056
	1943	24	442	7,602	841	8,443	19,420	13,49
	1944	30	71	18,250	3,230	21,480	76,086	80,614
	1945	13	14	3,819	16	3,835	28,914	27,768
	1946	18	33	8,941	1,286	10,227	20,014	31,525
Western Australia	1939	7	7	1,108	145	1,253	14,100	9,578
	1941	3	7	303	..	303	846	931
	1942	8	8	1,797	12	1,809	8,855	9,872
	1943	10	82	1,594	950	2,544	38,438	40,733
	1944	30	75	7,161	3,867	11,028	89,984	93,601
	1945	16	25	3,158	644	3,802	32,491	35,239
	1946	11	18	2,704	3,659	6,363	60,634	68,329
Tasmania	1939	4	4	53	..	53	166	93
	1941	..	..	..	..	..	..	..
	1942	2	2	51	..	51	51	45
	1943	2	2	46	142	188	201	176
	1944	4	4	533	..	533	35,675	36,510
	1945	10	11	1,572	..	1,572	6,168	7,146
	1946	8	15	1,675	..	1,675	6,646	7,056
Northern Territory	1939	2	16	234	40	274	3,642	3,600
	1941	1	1	200	..	200	600	825
	1942	1	1	150	..	150	300	350
	1943	..	..	..	..	..	..	..
	1944	..	..	..	..	..	..	..
	1945	..	..	..	..	..	..	..
	1946	2	2	527	..	527	1,957	3,100
Australian Capital Territory	1939	..	..	..	..	..	..	..
	1941	..	..	..	..	..	..	..
	1942	..	..	..	..	..	..	..
	1943	..	..	..	..	..	..	..
	1944	..	..	..	..	..	..	..
	1945	..	..	..	..	..	..	..
	1946	2	9	27	..	27	57	46
Australia..	1939	416	505	143,228	9,602	152,830	459,154	455,716
	1941	567	1,540	240,845	7,262	248,107	984,174	1,000,102
	1942	602	745	166,167	3,096	169,263	378,195	456,090
	1943	785	4,481	288,028	8,075	296,103	990,151	1,153,506
	1944	941	1,192	260,792	15,566	276,358	912,752	1,111,729
	1945	945	1,648	299,641	16,297	315,938	2,110,641	2,567,444
	1946	860	1,882	331,865	16,683	348,548	1,947,811	2,290,147

Detailed information in regard to the disputes during the abovementioned and previous years is given in the *Labour Reports* issued by this Bureau.

5. **Duration of Industrial Disputes, 1945 and 1946.**—The following table gives particulars of industrial disputes during 1945 and 1946 according to certain adopted limits of duration :—

INDUSTRIAL DISPUTES : DURATION, AUSTRALIA.

Limits of Duration.	Number.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
		Directly.	Indirectly.	Total.		
			1945.			
						£
1 day and less	533	149,097	1,606	150,703	149,451	207,542
2 days and more than 1 day	140	44,370	10,647	55,017	109,959	149,450
3 " " " 2 days	76	17,954	383	18,337	53,225	68,547
Over 3 days and less than 1 week (6 days)	35	12,877	157	13,034	53,571	74,775
1 week and less than 2 weeks	91	39,138	1,656	40,794	316,146	425,936
2 weeks " " 4 weeks	35	11,981	313	12,294	170,404	203,773
4 " " " 8 weeks	12	5,487	387	5,874	155,677	162,147
8 weeks and over	23	18,737	1,148	19,885	1,111,208	1,275,274
Total	945	299,641	16,297	315,938	2,119,641	2,567,444
			1946.			
						£
1 day and less	567	197,281	5,045	202,326	200,636	287,707
2 days and more than 1 day	107	25,034	1,708	26,742	52,252	74,192
3 " " " 2 days	46	8,700	722	9,422	28,023	41,461
Over 3 days and less than 1 week (6 days)	52	18,623	1,568	20,191	83,660	117,996
1 week and less than 2 weeks	42	55,796	40	55,836	433,442	495,826
2 weeks " " 4 weeks	28	13,715	3,982	17,697	252,164	306,664
4 " " " 8 weeks	16	3,112	1,596	4,708	154,794	165,773
8 weeks and over	11	9,604	2,022	11,626	742,873	800,528
Total	869	331,865	16,683	348,548	1,947,844	2,290,147

6. **Causes of Industrial Disputes, 1913 to 1946.**—The following table shows the principal causes of the industrial disputes which occurred in 1913, 1939 and 1942 to 1946 :—

INDUSTRIAL DISPUTES : CAUSES, AUSTRALIA.

Causes of Dispute.	1913.	1939.	1942.	1943.	1944.	1945.	1946.
			NUMBER.				
1. Wages—							
(a) For increase	42	13	8	27	18	19	30
(b) Against decrease ..	4	4	2	1	1	2	..
(c) Other wage questions ..	31	58	107	132	134	131	112
2. Hours of Labour—							
(a) For reduction	3	12	1	5	1	2	2
(b) Other disputes re hours	7	9	8	11	16	13	14
3. Trade Unionism—							
(a) Against employment of non-unionists ..	8	1	9	6	13	7	1
(b) Other union questions ..	5	48	24	30	32	69	64
4. Employment of Particular Classes or Persons	44	107	139	194	230	243	205
5. Working Conditions	51	90	132	200	266	268	273
6. Sympathetic	5	1	14	21	19	32	12
7. Other Causes	8	73	158	158	211	159	156
Total	208	416	602	785	941	945	869

INDUSTRIAL DISPUTES : CAUSES, AUSTRALIA—*continued.*

Causes of Dispute.	1913.	1939.	1942.	1943.	1944.	1945.	1946.
WORKPEOPLE INVOLVED.							
1. Wages—							
(*a*) For increase	8,633	4,384	2,150	10,441	4,440	4,929	91,423
(*b*) Against decrease ..	563	279	957	44	300	52	..
(*c*) Other wage questions ..	7,160	17,094	32,025	52,055	33,566	37,861	27,903
2. Hours of Labour—							
(*a*) For reduction	460	4,150	85	6,905	24	3,023	249
(*b*) Other disputes re hours..	1,819	3,383	1,630	5,430	7,912	7,550	8,888
3. Trade Unionism—							
(*a*) Against employment of non-unionists ..	5,370	21	1,797	2,944	3,788	1.700	116
(*b*) Other union questions ..	1,418	16,030	5,302	10,799	7,091	21,954	11,970
4. Employment of Particular Classes or Persons	11,370	28,691	41,402	60,391	59,576	80,238	58.133
5. Working Conditions	10,785	28,092	29,908	45,698	73,733	63.505	95,900
6. Sympathetic	947	2,600	7.977	11,593	11,118	22,392	10,849
7. Other Causes..	1,758	48,106	46,030	89,803	74,810	72,734	43,117
Total	50,283	152.830	169,263	296,103	276,358	315,938	348,548
WORKING DAYS LOST.							
1. Wages—							
(*a*) For increase	100,069	24,115	7,403	44,079	14,630	149,901	555,529
(*b*) Against decrease ..	9,438	4,472	13,991	44	450	142	..
(*c*) Other wage questions ..	78,183	67,550	98,669	154,339	124,256	191,194	72,473
2. Hours of Labour—							
(*a*) For reduction	2,774	21,636	85	13,248	72	153,023	15,246
(*b*) Other disputes re hours..	15,111	10,752	2,607	27,351	30,444	11,852	63,936
3. Trade Unionism—							
(*a*) Against employment of non-unionists ..	91,002	63	5,583	49.398	10,118	7,877	232
(*b*) Other union questions ..	32,388	52,086	9,179	43,851	29,203	168,105	47,419
4. Employment of Particular Classes or Persons	191,723	81.101	98,658	274,102	179,521	892,051	699.542
5. Working Conditions	73,562	108,409	66,348	96,171	215.546	206,798	325,686
6. Sympathetic	24,066	2.600	12,593	16.436	81.533	149.771	95,248
7. Other Causes..	5,212	86,370	63.079	271,132	226,979	188,927	72,533
Total	623.528	459,154	378,195	990,151	912.752	2,119,641	1,947,844

The main causes of industrial disputes are "Wage" questions, "Working Conditions," and "Employment of Particular Classes or Persons." In each of the years 1913 to 1925 with the exception of 1922, the number of dislocations concerning "Wages" exceeded those caused by any other question. From 1913 to 1946 the proportions varied between 19 per cent. in 1942 and 45 per cent. in 1916. Since 1925 the number of disputes concerning "Wages" has averaged about 20 per cent. of the total number for each year. The majority of the dislocations of work classified under the heading, "Employment of Particular Classes or Persons," are stoppages for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry, and has been the principal cause of industrial disturbance in most of the years since 1925, averaging about 30 per cent. of the total number for each year during that period. The number of disputes over "Trade Union" questions has averaged below 10 per cent. of the total number of disputes during the years under review. Stoppages of work concerning "Hours of Labour" increased during 1926 and 1927, but have been relatively unimportant during recent years.

The numbers of disputes concerning "Wages" were 152 in 1945 and 142 in 1946, representing for each year 16 per cent. of the total. Stoppages concerning "Employment of Particular Classes or Persons" numbered 243 in 1945 and 205 in 1946, 26 per cent. of the total in each case, and those concerning "Working Conditions" 268 in 1945 and 273 in 1946 or 28 per cent. and 31 per cent. respectively. Disputes classified under these three headings numbered 663 or 70 per cent. of the total dislocations during the year 1945 and 620 or 71 per cent. in 1946.

7. **Results of Industrial Disputes.**—The results of industrial disputes during 1939 and each of the years 1941 to 1946 are shown in the following table —

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS : AUSTRALIA.

Year.	Number.				Workpeople Involved.				Working Days Lost			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1939..	75	302	19	20	22,517	117,445	6,233	6,635	104,192	256,602	43,569	54,791
1941..	225	287	24	29	74,856	146,031	11,438	15,062	271,539	522,837	93,424	94,464
1942..	166	393	9	28	48,848	107,656	2,517	8,913	114,540	201,381	13,041	36,973
1943..	202	497	10	74	72,116	190,668	4,481	27,720	279,440	569,522	36,966	74,382
1944..	260	603	3	72	73,643	171,347	1,234	28,950	315,216	413,606	11,043	151,471
1945(*a*)	205	652	5	79	58,905	206,856	554	48,756	580,515	[illegible]	7,723	387,119
1946(*a*)	167	621	7	69	43,912	191,000	34,987	74,342	218,411	416,350	236,183	865,915

(*a*) The following disputes which were incomplete at 31st December, 1945 and 1946, should be added to the above figures for the relevant years to effect a balance with those published in the preceding tables :—

State.	Number.		Establishments involved.		Workpeople involved.		Working Days Lost.	
	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.
New South Wales ..	3	1	3	1	836	227	48,785	10,669
Victoria	1	2	1	91	31	3,314	1,271	184,996
Queensland	..	1	..	1	..	230	..	4,600
South Australia ..	..	1	..	1	..	536	..	10,720
Total	4	5	4	94	867	4,307	50,056	210,985

8. **Methods of Settlement.**—The following table gives a classification of the methods of settlement according to the adopted schedule :—

INDUSTRIAL DISPUTES : METHODS OF SETTLEMENT, AUSTRALIA.

Methods of Settlement.	1913.	1939.	1942.	1943.	1944.	1945.(*a*)	1946.(*a*)
			NUMBER.				
Negotiation—							
Direct between employers and employees or their representatives	119	277	233	356	387	482	385
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	17	17	117	100	130	75	89
Under State Industrial Act—							
By interventions, assistance, or compulsory conference ..	19	5	9	13	19	10	5
By reference to Board or Court ..	22	2	16	30	25	22	19
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	4	6	43	38	72	43	19
By filling places of workpeople on strike or locked out	13	1	..	..	..	1	3
By closing-down establishment permanently	1	2	..	..	1	..	..
By other methods	13	106	178	246	304	308	344
Total	208	416	596	783	938	941	864

(*a*) See note to previous table.

INDUSTRIAL DISPUTES: METHODS OF SETTLEMENT, AUSTRALIA—*continued.*

WORKPEOPLE INVOLVED.

Methods of Settlement.	1913.	1939.	1942.	1943.	1944.	1945.(*a*)	1946.(*a*)
Negotiation—							
Direct between employers and employees or their representatives	23,357	80,195	57,556	101,169	87,122	129,135	86,174
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	3,172	2,489	42,072	43,556	34,942	23,426	57,768
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	6,505	4,925	2,259	4,583	12,684	7,967	724
By reference to Board or Court ..	12,774	429	4,642	15,096	10,970	11,981	6,483
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	659	3,268	14,873	12,251	27,966	20,596	10,059
By filling places of workpeople on strike or locked out	658	20	..	..	..	10	130
By closing-down establishment permanently	170	178	..	..	19	..	..
By other methods	2,988	61,326	46,532	118,330	101,471	121,956	182,903
Total	50,283	152,830	167,934	294,985	275,174	315,071	344,241

WORKING DAYS LOST.

Methods of Settlement.	1913.	1939.	1942.	1943.	1944.	1945.(*a*)	1946.(*a*)
Negotiation—							
Direct between employers and employees or their representatives	94,400	245,709	98,650	244,920	176,569	745,989	265,401
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	26,335	52,943	115,727	246,334	150,431	158,452	339,481
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	187,871	35,647	10,112	19,430	46,132	21,268	12,539
By reference to Board or Court ..	221,769	3,366	18,761	82,112	78,431	394,787	116,681
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	2,105	46,450	69,441	53,330	197,599	367,799	147,509
By filling places of workpeople on strike or locked out	14,139	20	..	..	..	110	7,552
By closing-down establishment permanently	20,400	3,892	..	..	209	..	..
By other methods	56,509	71,127	53,244	314,184	241,965	381,180	847,696
Total	623,528	459,154	365,935	960,310	891,336	2,069,585	1,736,859

(*a*) See note to previous table.

The majority of disputes are settled by direct negotiations between employers and employees, the proportion so settled since 1913 ranging between 43 per cent. in 1925 and 78 per cent. in 1937. The percentage was 51 in 1945 and 45 in 1946. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has varied considerably during the period under review, ranging between 3 per cent. in 1915 and 22 per cent. in 1913. The proportion was 8 per cent. in 1945 and 5 per cent. in 1946. In connexion with the comparatively large number of disputes which are classified as having been settled "By other methods," many stoppages of work occur each year, principally at collieries, but the cause of such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble. In 1946 the percentage of disputes settled by "other methods" rose to 40, the highest recorded for that class of settlement.

F. ASSOCIATIONS.

§ 1. Labour Organizations.

1. **Registration.**—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value, consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Official Year Book. The latest information available as to registrations is as follows:—New South Wales, 202 industrial unions of employers and 154 industrial unions of employees, the membership not being available in either case; Queensland, 20 industrial unions of employers with approximately 17,000 members, and 75 industrial unions of employees with approximately 194,000 members; South Australia, 34 organizations of employees with 48,000 members; Western Australia, 35 organizations of employers with 883 members, and 131 organizations of employees with 66,000 members. There is no provision in the South Australian Industrial Acts for the registration of organizations of employers, and in Victoria and Tasmania, where Wages Board systems of wage fixation are in operation, organizations of employers and employees are not required to register. Registration under Commonwealth legislation began in 1906. In that and the four years following, there was but one union of employers; another was registered in 1911. The unions of employees registered in 1906 were 20, with 41,413 members. At the end of 1945 and 1946, the number of employers' organizations registered under the provisions of the Commonwealth Conciliation and Arbitration Act was 42. The number of unions registered at the end of 1945 and 1946 was 161, with a membership of approximately 1,082,472 at the end of 1945 and 1,120,858 at the end of 1946 representing 90 and 89 per cent. respectively of the total membership of all trade unions in Australia.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or International union. Broadly speaking, there are four distinct classes of labour organizations:—(i) the local independent; (ii) the State; (iii) the interstate; and (iv) the Australian or International; but a number of variations occur from each of these classes. The leading characteristics of each of these types are briefly outlined in *Labour Report* No. 2 (pp. 7–9) issued by this Bureau.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912 the Labour and Industrial Branch of the Commonwealth Bureau of Census and

Statistics was established and with the cordial co-operation of the officials of the labour organizations comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1945 and 1946 :—

TRADE UNIONS: BRANCHES AND MEMBERS, 1945 and 1946.

State or Territory.	Number of Separate Unions.		Number of Branches.		Number of Members.	
	1945.	1946.	1945.	1946.	1945.	1946.
New South Wales ..	184	183	591	591	501,845	527,738
Victoria	139	138	382	382	306,649	324,380
Queensland.. ..	110	110	307	307	192,087	199,719
South Australia ..	112	111	173	173	97,829	101,595
Western Australia ..	132	130	208	209	71,512	77,622
Tasmania	71	69	71	70	27,114	28,314
Northern Territory ..	4	4	..	..	1,406	1,997
Australian Capital Territory.. ..	15	15	1	1	1,953	2,293
Total ..	767	760	1,733	1,733	1,200,395	1,263,658
Australia	(a) 362	(a) 362	(b) 2,138	(b) 2,131	1,200,395	1,263,658

(a) Allowing for interstate duplication. The figures represent the number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations which are practically independent and self-governing. (b) See remarks below.

In the preceding table the number of separate unions in each State refers to the number of unions which are represented in each State, excluding branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (see last line but one), it is obvious that, in the case of interstate and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line, allowance has been made for this duplication. State branches of interstate or federated unions, as well as sub-branches within a State, are included under the heading " Branches " in the fourth and fifth columns—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. At the end of 1946 there were, therefore, 362 distinct organizations and interstate groups of organizations in Australia, having 2,131 State branches and sub-branches, and a total of 1,263,658 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1943 to 1946 compared with 1939. The number of unions specified refers to the number of different unions represented in each State and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted. Each year since 1939 the number of unions has decreased while membership has increased. Compared with 1939, membership in 1946 had increased by 38 per cent.

TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA.

Industrial Groups.	1939.	1943.	1944.	1945.	1946.
NUMBER OF UNIONS.					
Manufacturing—	(a)	(a)	(a)	(a)	(a)
I. Wood, Furniture, etc.	17 (4)	17 (5)	17 (5)	17 (4)	17 (4)
II. Engineering, Metal Works, etc. ..	64 (22)	61 (22)	61 (22)	61 (22)	58 (22)
III. Food, Drink, Tobacco, etc. ..	72 (35)	67 (33)	66 (30)	66 (35)	66 (35)
IV. Clothing, Textiles, etc.	26 (12)	25 (12)	24 (12)	23 (9)	23 (9)
V. Books, Printing, etc.	14 (8)	14 (8)	14 (8)	15 (10)	15 (10)
VI. Other Manufacturing	71 (37)	74 (37)	74 (37)	68 (36)	67 (36)
VII. Building	48 (28)	48 (27)	48 (27)	48 (24)	48 (24)
III. Mining, Quarrying, etc.	16 (13)	18 (13)	18 (13)	17 (14)	17 (14)
IX. Railway and Tramway Services ..	51 (29)	51 (29)	51 (29)	50 (31)	50 (31)
X. Other Land Transport	13 (6)	12 (5)	12 (5)	12 (5)	12 (5)
XI. Shipping, etc.	60 (21)	50 (19)	51 (19)	45 (19)	45 (19)
XII. Pastoral, Agricultural, etc. ..	9 (5)	9 (5)	9 (5)	9 (3)	9 (3)
XIII. Domestic, Hotels, etc.	19 (18)	19 (17)	19 (17)	18 (17)	18 (17)
XIV. Miscellaneous—					
(i) Banking, Insurance and Clerical	33 (20)	33 (21)	33 (21)	33 (14)	33 (14)
(ii) Public Service	147 (50)	142 (49)	142 (49)	143 (48)	142 (48)
(iii) Retail and Wholesale ..	15 (8)	15 (8)	15 (8)	15 (9)	15 (9)
(iv) Municipal, Sewerage and Labouring	20 (11)	20 (12)	20 (12)	20 (11)	20 (11)
(v) Other Miscellaneous ..	124 (53)	115 (53)	107 (51)	107 (51)	105 (51)
Total	819 (380)	790 (375)	781 (370)	767 (362)	760 (362)
NUMBER OF MEMBERS.					
Manufacturing—					
I. Wood, Furniture, etc.	27,990	28,099	29,280	30,582	31,952
II. Engineering, Metal Works, etc. ..	99,731	206,791	209,105	197,182	201,050
III. Food, Drink, Tobacco, etc. ..	80,328	75,361	75,404	75,655	80,691
IV. Clothing, Textiles, etc.	68,847	102,406	102,369	98,155	100,211
V. Books, Printing, etc.	22,303	23,810	25,127	25,483	28,492
VI. Other Manufacturing	52,074	95,116	84,782	57,262	63,805
VII. Building	45,651	71,645	64,780	71,651	78,066
VIII. Mining, Quarrying, etc.	48,812	41,956	40,282	38,581	42,758
IX. Railway and Tramway Services ..	105,938	121,044	124,763	125,036	128,426
X. Other Land Transport	19,488	21,688	21,920	27,555	29,455
XI. Shipping, etc.	28,760	32,342	35,936	34,150	32,417
XII. Pastoral, Agricultural, etc... ..	40,276	37,730	36,168	34,592	37,756
XIII. Domestic, Hotels, etc.	13,177	22,167	28,382	30,711	37,758
XIV. Miscellaneous—					
(i) Banking, Insurance and Clerical	30,013	65,577	76,645	84,288	79,468
(ii) Public Service	89,848	127,341	122,750	128,372	130,173
(iii) Retail and Wholesale ..	36,290	35,346	36,781	36,470	40,648
(iv) Municipal, Sewerage and Labouring	46,552	45,205	46,428	45,056	52,705
(v) Other Miscellaneous ..	50,392	51,239	57,867	59,014	67,827
Total	915,470	1,204,863	1,218,778	1,200,395	1,263,658

(a) Allowing for interstate duplication.

(iv) *Trade Unions : Numbers of Male and Female Members and Percentage to Total Wage and Salary Earners, Australia.* Prior to 1939 the numbers of male and female wage and salary earners (including unemployed) aged 20 years and over were estimated by increasing the numbers of such persons enumerated at the 1933 Census in ratio to the annual increases in males and females aged 20 to 64 years. Similarly, for wage and salary earners (including unemployed) under 20 years the numbers of such persons at the 1933 Census were increased in ratio to the annual increases in males and females 15 to 19 years. Further, allowance was made for (a) increase in the proportion of females who became wage and salary earners and (b) youths and girls who were without occupation but were not recorded in the wage-earning group at the 1933 Census. While the foregoing method of estimation would produce fairly accurate results during normal times, the drastically altered conditions of employment over the period of the recent war necessitated the adoption of more direct methods. For 1939 and subsequent years, therefore, the estimates are based on data obtained largely from the National Register of July, 1939, the Pay-roll Tax returns commencing from July, 1941, the Civilian Register of June, 1943, the Occupation Survey of June, 1945 and records of Defence Forces. Since 1939 the estimated numbers of wage and salary earners *include* (a) wage earners enlisted in the Defence Forces and (b) persons who were "not gainfully occupied" before the outbreak of war but who subsequently entered wage-earning employment, and (c) persons who in normal times would be occupied in their own businesses but undertook wage and salary earning employment during the war and post-war period.

The following table shows separately for males and females (a) the number of members of trade unions; (b) the estimated number of wage and salary earners of each sex 20 years of age and over in all professions, trades and occupations; and (c) the percentage of the former (a) on the latter (b) at the end of each year, 1943 to 1946 as compared with 1939. The estimated number of wage and salary earners includes all persons 20 years of age and over in receipt of wages or salary, as well as those unemployed, and therefore embraces a large number of adults who are not eligible for membership of any trade union, such as certain persons employed in professional occupations, as well as others who, while eligible for membership so far as the nature of their trade or occupation is concerned, do not reside in a locality which is covered by any union devoted to their particular trade or occupation. Moreover, the age at which persons are eligible for membership varies in different unions. The census results are classified in five-yearly age groups, and age 20 years is taken as approximating to the age of admission to membership. A line has also been added showing the estimated numbers of "junior" workers under 20 years of age.

TRADE UNIONS: NUMBER OF MALE AND FEMALE MEMBERS AND PERCENTAGE TO TOTAL WAGE AND SALARY EARNERS, AUSTRALIA.(a)

Particulars.	1939.	1943.	1944.	1945.	1946.
MALES.					
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	1,507,500	1,749,700	1,707,400	1,714,000	1,639,100
No. of Members of Unions	778,336	935,997	944,777	941,297	1,013,653
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	51.6	53.5	55.3	54.9	61.8
Junior Wage and Salary Earners (under 20)	275,600	275,300	272,600	266,000	257,900
FEMALES.					
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	417,600	546,000	541,000	499,000	482,000
No. of Members of Unions	137,134	268,866	274,001	259,098	250,005
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	32.8	49.2	50.6	51.9	51.9
Junior Wage and Salary Earners (under 20)	187,200	227,000	222,000	219,000	211,300

(a) Includes wage earners enlisted in the defence forces.

TRADE UNIONS: NUMBER OF MALE AND FEMALE MEMBERS AND PERCENTAGE TO TOTAL WAGE AND SALARY EARNERS, AUSTRALIA.(a)—*continued.*

Particulars.	1939.	1943.	1944.	1945.	1946.
TOTAL.					
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	1,925,100	2,295,700	2,248,400	2,213,000	2,121,100
No. of Members of Unions	915,470	1,204,863	1,218,778	1,200,395	1,263,658
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	47.6	52.5	54.2	54.2	59.6
Junior Wage and Salary Earners (under 20)	462,800	502,300	494,600	485,000	469,200

(a) Includes wage earners enlisted in the defence forces.

(v) *Interstate or Federated Unions.* The following table gives particulars of the number and membership of interstate or federated unions in 1945 and 1946 :—

INTERSTATE OR FEDERATED UNIONS: AUSTRALIA.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
1945.						
Number of Unions ..	16	17	16	25	46	120
,, ,, Members ..	29,998	39,434	117,131	300,011	522,340	1,008,914
1946.						
Number of Unions ..	15	17	16	26	46	120
,, ,, Members ..	23,549	43,969	143,495	318,356	549,042	1,078,411

(a) Certain unions in this group have, in addition to branches in each of the six States, branches in the Northern Territory and the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 120 in 1946, and the percentage of the membership of such organizations on the total membership of all organizations rose from 65 to 85 during the same period.

3. **Central Labour Organizations.**—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

A new Central Labour Organization called the Australasian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the Trade Unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australasian Council is based on the Metropolitan Trades and Labour Councils in each State, such bodies having the right to appoint two representatives to act on the Executive of the Council. The Metropolitan Trades and Labour Councils are the branches of the Australasian Council. In addition to the representatives from the Metropolitan Councils, the Executive consists of four officers—the President, two Vice-Presidents, and a Secretary, who are elected by and from the All-Australian Trade Union Congress.

The objective of the Council is the socialization of industry, i.e., production and exchange. The methods to be adopted are :—(*a*) The closer organization of the workers by the transformation of the Australasian Trade Union Movement from the craft to an industrial basis by the establishment of one Union in each industry; (*b*) the consolidation of the Australasian Labour Movement with the object of unified control, administration and action; (*c*) the centralized control of industrial disputes; and (*d*) educational propaganda among unions. The Australasian Council of Trade Unions is the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the Trade Union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the Annual International Labour Conference.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated thereto, in each State at the end of 1945 and 1946 :—

CENTRAL LABOUR ORGANIZATIONS: NUMBER AND UNIONS AFFILIATED.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1945.								
Number of Councils	7	9	10	3	9	4	1	43
Number of Unions and Branch Unions affiliated ..	223	258	112	78	295	88	15	1,069
1946.								
Number of Councils	9	9	11	7	9	5	1	51
Number of Unions and Branch Unions affiliated ..	260	261	121	138	296	102	15	1,193

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated to the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

§ 2. Employers' Associations.

The collection of detailed particulars in respect of Employers' Associations has now been discontinued, but particulars for the years 1922 to 1939 appear in issues of the Official Year Book prior to No. 34 and in the *Labour Reports*.

G. COMPARATIVE INDEX-NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index-numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

COMPARATIVE INDEX-NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Base of each Group. Weighted Average of Six Capitals 1911 = 1,000 (a).)

Period.	Retail Price Index-numbers.						Nominal Wages, Adult Males.	Real Wages. (c)	Percentage of Unemployment among Trade Unionists.
	Food and Groceries.	Housing (4 and 5 Rooms). (b)	Food, Housing (4 and 5 Rooms) ("B" Series.)	Clothing.	Miscellaneous.	All Items of Household Expenditure ("C" Series.)			
Year—									%
1911 ..	1,000	1,000	1,000	(d)1,000	(d)1,000	(d)1,000	1,000	1,000	4.7
1914 ..	1,144	1,082	1,121	1,140	1,140	1.140	1,081	948	8.3
1921 ..	1.902	1,410	1,717	1,883	1,537	1,680	1,826	1,087	11.2
1928 ..	1,761	1,743	1,755	1,507	1,537	1,675	1,963	1,172	10.8
1932 ..	1,425	1,336	1,390	1,215	1,457	1.377	1,639	1,190	29.0
1938 ..	1,584	1,540	1,568	1,253	1,463	1,488	1.799	1,209	8.7
1939 ..	1,657	1,577	1,626	1,271	1,465	1,526	1,846	1,211	9.7
1941 ..	1,693	1,595	1,654	1,690	1,613	1,673	1,997	1,194	3.7
1942 ..	1,843	1,596	1,742	1,977	1,693	1,809	2,164	1,196	1.6
1943 ..	1,855	1,595	1,749	2,177	1,766	1,876	2,309	1,231	1.1
1944 ..	1,834	1,595	1,737	2,168	1,773	1.867	2,326	1,246	1.2
1945 ..	1,849	1,595	1,746	2,155	1.767	1,868	2,339	1,252	1.2
1946 ..	1,852	1,596	1,748	2,276	1,776	1,900	2,400	1,263	1.4
Quarter—									
1939.									
March ..	1,673	1,568	1,631	1,258	1,461	1,524	1,826	1,198	9.6
June ..	1,654	1,575	1,623	1,264	1,461	1,522	1,847	1,214	9.5
September	1,645	1,582	1,620	1,264	1,463	1,520	1,854	1,220	10.2
December	1,657	1,584	1,628	1,297	1,472	1,536	1,858	1,210	9.3
1941.									
March ..	1,713	1,595	1,666	1,598	1,581	1,651	1,966	1,191	5.3
June ..	1,679	1,595	1.646	1,669	1,594	1,660	1,984	1,195	3.6
September	1,673	1,595	1,643	1,705	1,633	1,675	2,002	1,195	3.2
December	1,705	1,596	1,662	1,787	1,644	1,707	2,034	1,192	2.9
1942.									
March ..	1,771	1,597	1,701	1,838	1,667	1,746	2,091	1,198	1.8
June ..	1,832	1,596	1,736	1,942	1,673	1,793	2,127	1,186	1.7
September	1,887	1,595	1,768	2,028	1.689	1,835	2,182	1,189	1.6
December	1,880	1,595	1,764	2,098	1,741	1,860	2,257	1,213	1.3
1943.									
March ..	1.860	1,595	1,752	2,130	1,749	1,863	2,283	1,225	1.2
June ..	1,891	1,595	1,771	2,216	1,763	1,897	2,292	1,208	1.1
September	1,853	1,594	1,748	2,192	1,773	1,880	2,331	1,240	1.1
December	1,815	1,595	1,726	2,171	1,778	1,864	2,329	1,249	1.1
1944.									
March ..	1,824	1,595	1,731	2,167	1,775	1,864	2,322	1,246	1.0
June ..	1,834	1,595	1.737	2,160	1,773	1.865	2,322	1,245	1.4
September	1,852	1,595	1,748	2,166	1,772	1,873	2,327	1,242	1.2
December	1,827	1,595	1,733	2,180	1,770	1,867	2,332	1,249	1.2
1945.									
March ..	1,838	1,595	1,739	2,149	1,767	1,863	2,333	1,252	1.1
June ..	1,854	1,595	1,749	2,141	1,767	1,866	2,336	1,252	1.1
September	1,860	1,595	1,752	2,140	1.767	1,868	2,340	1,253	1.2
December	1,842	1,595	1,742	2,189	1,767	1,874	2,348	1,253	1.2
1946.									
March ..	1,853	1,595	1,748	2,201	1,772	1,881	2,354	1,251	1.4
June ..	1,863	1,595	1,754	2,259	1,776	1,900	2,360	1,242	1.3
September	1,839	1,596	1,741	2,299	1,776	1,902	2,378	1,250	1.4
December	1,854	1,596	1,750	2,343	1,781	1,918	2,507	1,307	1.4
1947.									
March ..	1,915	1,596	1,785	2,305	1.798	1,933	2,527	1,307	1.4
June ..	1,915	1,597	1,803	2,319	1,802	1,948	2.545	1.306	1.2

(a) The index-numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of housing and food and groceries, since the cost in 1911 *in each group or combination of groups* is made equal to 1,000. (b) *See* footnote (b) on page 443 (c) Index of nominal weekly wage rates divided by "C" Series Retail Prices Index. (d) Taken back from true base (November, 1914 = 1,000) by means of the Food and Rent (All Houses) Index.

CHAPTER XIII.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The statistics on Local Government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Efforts are continually being made, however, as opportunity and circumstances permit, to improve them. Various returns supplied by State Statisticians, but discontinued during the war, have now been recommenced. In consequence, the matter in § 2 has been considerably advanced.

2. **Local Government Authorities.**—A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by this Bureau in a separate work entitled *Local Government in Australia.* In this publication the systems in force at that time are examined, the development of local government in Australia is traced since its inception, and all available statistical information is collected. The scope of the work includes those water supply, sewerage, drainage and irrigation boards, harbour and marine boards, and fire brigade boards, whose members are elective. Details are given of the various classes of authorities, their constitutions and powers, the qualifications required of electors and those elected, methods of valuation, rates, borrowing powers, revenue and expenditure, government grants, etc. A conspectus is appended of the acts in force relating to local government, together with acts relating to duties and functions which might be imposed on a local authority.

3. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of " main " and " developmental " roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of " Local Government ", they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 3 are those of the Government only, relating either to the supervisory board or commission in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of Local Government Authorities in respect of roads.

4. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

5. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

6. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

7. **Other Local Government Activity.**—The activities referred to above are not the only forms of local government undertakings. There are others, the most important being tramways and omnibus services and electric light and gas undertakings, whose control generally is less restricted to local government authorities. These are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter V.—Transport and Communication contains information on municipal transport services, while particulars of electric light and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

§ 2. Local Government Authorities.

1. **Area, Population and Value of Ratable Property.**—(i) *New South Wales.* For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into municipalities (cities and principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1945 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

The operations of the Capital City are regulated by the Sydney Corporation Act and of other municipalities and shires by the Local Government Act. Councils elected for a term of three years comprise: City of Sydney, 20 aldermen; City of Greater Newcastle, 21 aldermen; other municipalities, 6 to 15 aldermen; shires, 6 to 9 councillors.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 13 county councils at 31st December, 1945.

The area, population and value of ratable property in the incorporated areas for the year ended 31st December, 1945, are given below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value is not inconsiderable in the aggregate.

LOCAL GOVERNMENT AUTHORITIES, NEW SOUTH WALES: AREA, POPULATION AND VALUE OF RATABLE PROPERTY, 1945.

Local Bodies.	Number.	Area.	Population. (*a*)	Value of Ratable Property.		
				Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.(*b*)
		Acres.		£'000.	£'000.	£'000.
Metropolitan—						
Capital City ..	1	3,220	95,952	50,286	174,972	7,874
Other	48	151,283	1,471,467	108,792	363,751	29,458
Total ..	49	154,503	1,567,419	159,078	538,723	37,332
Outside Metropolitan Area.	240	117,621,668	1,395,942	187,400	(*c*)	(*c*)
Grand Total ..	289	117,776,171	2,963,361	346,478	(*c*)	(*c*)

(*a*) As at Census, 30th June, 1947. (*b*) Nine-tenths annual rental value of land with improvements thereon. (*c*) Not available. (*d*) Includes City of Greater Newcastle.

(ii) *Victoria.* Local Government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island in Westernport Bay and Julia Percy Island, off Port Fairy. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act.

The financial years of the cities of Melbourne and Geelong, which, prior to 1938, ended on 31st December and 31st August respectively, now end, with those of all other municipalities, on 30th September. The area, population and value of ratable property in the incorporated areas are given below :—

LOCAL GOVERNMENT AUTHORITIES, VICTORIA : AREA, POPULATION AND ESTIMATED VALUE OF RATABLE PROPERTY.

Local Bodies.	Number.	Area 1940–41.	Population. (*a*)	Estimated Value of Ratable Property 1945–46.	
				Improved Capital Value.	Annual Value.
		Acres.		£'000.	£'000.
Metropolitan—					
Capital City	1	7,740	99,868	103,464	5,173
Other(*b*)	28	160,906	1,116,932	326,910	17,682
Total	29	168,646	1,216,800	430,374	22,855
Outside Metropolitan Area (*c*) ..	168	56,074,895	834,463	317,659	15,916
Grand Total	197	56,243,541	2,051,263	748,033	38,771

(*a*) As at Census, 30th June, 1947. (*b*) Includes the whole of the Shire of Braybrook and the whole of the City of Heidelberg (*c*) Includes the whole of the Shires of Broadmeadows, Keilor and Mulgrave.

Particulars of the unimproved capital value are not available.

(iii) *Queensland.* The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. The following table gives particulars of the area, population, and value of ratable property in the incorporated areas for the year 1944–45 :—

LOCAL GOVERNMENT AUTHORITIES, QUEENSLAND : AREA, POPULATION AND VALUE OF RATABLE PROPERTY, 1944–45.

Local Bodies.	Number.	Area.	Population. (*a*)	Unimproved Capital Value.
		Acres.		£'000.
Capital City	1	246,400	402,172	21,015
Outside Metropolitan Area ..	143	428,873,600	697,257	53,570
Total	144	429,120,000	1,099,429	74,585

(*a*) As at Census, 30th June, 1947.

Particulars of improved capital value and annual value are not available.

(iv) *South Australia.* The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

The following table gives the area, population and value of ratable property in incorporated areas for the year ended 30th June, 1946.

LOCAL GOVERNMENT AUTHORITIES, SOUTH AUSTRALIA: AREA, POPULATION AND VALUE OF RATABLE PROPERTY, 1945-46.

Local Bodies.	Number.	Area.	Population. (a)	Value of Ratable Property.		
				Unimproved Capital Value.	Improved Capital Value.	Annual Value.
Metropolitan—		Acres.		£'000.	£'000.	£'000.
Capital City	1	3,772	35,032	12,100	30,000	1,478
Other	20	99,215	347,572	(b)	85,000	4,265
Total ..	21	102,987	382,604	(b)	115,000	5,743
Outside Metropolitan Area	122	34,402,159	253,855	(b)	90,000	4,516
Grand Total ..	143	34,505,146	636,459	(b)	205,000	10,259

(a) As at Census, 30th June, 1947. (b) Not available.

(v) *Western Australia.* In this State, Local Government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincides with those of the municipalities and district road boards. The following table gives particulars of the area population and value of ratable property in incorporated areas for the year ended October, 1946 for municipalities, and the year ended June, 1946 for district road boards.

LOCAL GOVERNMENT AUTHORITIES, WESTERN AUSTRALIA: AREA, POPULATION AND VALUE OF RATABLE PROPERTY, 1945-46.

Local Bodies.	Number.	Area.	Population. (a)	Value of Ratable Property.		
				Unimproved Capital Value.	Improved Capital Value.	Annual Value.
Municipalities—		Acres.		£'000.	£'000.	£'000.
Metropolitan—						
Capital City ..	1	15,251	98,924	(b)	31,000	1,653
Other	8	11,374	71,165	(b)	13,738	728
Total ..	9	26,625	170,089	(b)	44,738	2,381
Outside Metropolitan Area	12	32,768	51,810	(b)	8,716	523
Total ..	21	59,393	221,899	(b)	53,454	2,904
District Road Boards—						
Metropolitan ..	11	(c) 322,880	102,497	4,089	(b)	14
Outside Metropolitan Area	116	624,206,720	175,047	18,071	(b)	489
Total ..	127	624,529,000	277,544	22,160	(b)	503
All Authorities—						
Metropolitan—						
Capital City ..	1	15,251	98,924	(b)	31,000	1,653
Other	19	334,254	173,662	(b)	(b)	742
Total ..	20	349,505	272,586	(b)	(b)	2,395
Outside Metropolitan Area	128	624,239,488	226,857	(b)	(b)	1,012
Grand Total ..	148	624,588,993	499,443	(b)	(b)	3,407

(a) As at Census, 30th June, 1947. (b) Not available. (c) Includes Swan District (235,264 acres) of which 8,064 acres only are in the Metropolitan Area.

The method of valuation is not identical in the case of all district road boards, as in some the assessment is based on the unimproved capital value and in others partly on the unimproved capital value and partly on the annual value. The amounts given are the totals for the areas rated on each valuation, and are not a function of each other.

(vi) *Tasmania.* The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts. The following table gives particulars of the area, population and value of ratable property in incorporated areas for the year ended June, 1946.

LOCAL GOVERNMENT AUTHORITIES, TASMANIA: AREA, POPULATION AND VALUE OF RATABLE PROPERTY, 1945–46.

Local Bodies.	Number.	Area.	Population. (a)	Value of Ratable Property.		
				Unimproved Capital Value.	Improved Capital Value.	Annual Value.
Metropolitan—		Acres.		£'000.	£'000.	£'000.
Capital City	1	17,760	56,668	5,178	15,502	975
Other (*b*)	2	99,000	19,767	1,132	3,443	238
Total ..	3	116,760	76,435	6,310	18,945	1,213
Outside Metropolitan Area	46	16,661,240	179,972	17,321	41,085	2,253
Grand Total ..	49	16,778,000	256,407	23,631	60,030	3,466

(*a*) As at Census, 30th June, 1947. (*b*) Comprises the whole of the Municipalities of Clarence and Glenorchy.

2. **Finances.**—(i) *General.* As the result of resolutions adopted at a conference of Statisticians in 1936 the financial statistics of Local Government Authorities were compiled in the various States on a more comparable basis than formerly. The collection of this information was suspended in most States for the duration of the war, but has now been resumed. The tables following show the latest figures available, which, however, do not all relate to the same year.

(ii) *Ordinary Services.* (*a*) *Details.* In the returns of revenue and expenditure in the following table the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various Local Government Authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES, 1944-1946.

Particulars.	N.S.W. 1945. (*a*)	Victoria. 1945–46. (*b*)	Q'land. 1944–45. (*c*)	S. Aust. 1945–46. (*c*)	W. Aust. 1945–46. (*d*)	Tas. 1945–46. (*c*)
Number of Local Government Authorities	289	197	144	143	148	49

REVENUE (EXCLUDING LOAN RECEIPTS).

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.
	£	£	£	£	£	£
Taxation—						
Rates (net)	6,063,698	4,266,359	2,921,586	1,019,992	720,429	426,346
Penalties	64,034	22,993			63	223
Licences	109,746	54,104	22,836	26,633	18,680	9,439
Total	6,237,478	4,343,456	2,944,422	1,040,625	739,172	436,008
Public Works and Services—						
Sanitary and Garbage Services	649,086	195,554	595,310	35,274	106,763	26,624
Council Properties	672,794	594,196	362,109	111,357	108,410	60,605
Street Construction ..	121,466	124,732	17,564	27,045	7,882	1,250
Other	291,278	98,433	19,036	32,360	13,901	10,090
Total	1,734,624	1,012,915	994,019	200,036	230,956	98,569
Government Grants—						
Unemployment Relief ..	..	..	..	7,940	..	..
Roads	900,714	75,550	307,197	(*e*) 220,111	25,288	6,696
Other	383,718	178,295	(*f*) 115,553	5,710	4,201	6,253
Total	1,284,432	253,845	422,750	233,761	29,489	12,949
Profits from Business Undertakings	..	212,355	19,788	..	50,330	..
Fees and Fines	..	15,090	196,560	18,436	297,516	50,419
All Other	..	66,936		49,422	87,907	
Total, Revenue ..	9,256,534	5,904,597	4,577,539	1,554,280	1,441,370	597,945

EXPENDITURE (EXCLUDING LOAN EXPENDITURE).

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.
General Administration ..	724,749	797,216	327,780	171,116	172,744	75,306
Debt Services (excluding Business Undertakings)—						
Interest	641,225	361,310	589,469	23,718	55,817	19,435
Redemption	963,140	470,915	537,770	49,095	140,068	33,756
Exchange	25,913	..	94,029	..	2,277	631
Other	2,262	6,889	825	197	55	318
Total	1,632,540	839,114	1,222,093	73,010	198,217	54,140
Public Works and Services—						
Roads, Streets and Bridges ..	3,618,692	2,049,414	1,436,653	868,458	514,781	252,665
Health Administration ..	183,476	262,715	109,264	102,827	47,502	20,476
Sanitary and Garbage Services	905,989	404,521	401,669	107,556	151,251	31,671
Street Lighting	378,057	177,518	74,327	65,687	52,879	26,674
Council Properties	1,063,066	1,133,905	319,328	176,680	343,621	77,955
Other	214,552	56,923	(*g*) 289,721	56,900	33,004	13,827
Total	6,363,832	4,084,996	2,630,962	1,378,108	1,143,038	423,268
Grants—						
Fire Brigades .. .	140,931	105,691	51,818	(*h*)	20,186	8,723
Hospitals and Ambulances ..	41,274	66,694	229,075	(*h*)	4,736	60
Other Charities			655	5,206	1,630	5,395
Other	(*i*) 225,262	(*j*) 205,419	10,554	3,135	1,210	725
Total	407,467	407,804	292,102	8,041	27,762	14,903
All Other	297,812	28,916	91,465	1,839	52,308	54,094
Total, Expenditure	9,426,400 *less* 165,619*k* 9,260,781	6,218,046	4,564,402	1,632,714	1,594,069	622,311

(*a*) Figures for New South Wales relate to the year ended 31st December, 1945, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (*b*) Year ended 30th September, 1946. (*c*) Year ended 30th June. (*d*) Municipalities—Year ended 31st October, 1946; Road Districts—Year ended 30th June, 1946. (*e*) Includes £8,065 reimbursements from Highways Departments for work done. (*f*) Includes £57,573 for sewerage and drainage. (*g*) Includes £83,964 for sewerage and drainage. (*h*) Compulsory contributions included under Public Works and Services. (*i*) To Main Roads Department. (*j*) Includes £120,545 to Country Roads Board. (*k*) This deduction offsets duplications caused by the inclusion above of particulars of expenditure on (i) the purchase from revenue of assets and the depreciation of these assets, and (ii) the depreciation of assets purchased from loans and the repayment of those loans. The amount deducted cannot be apportioned according to the various headings.

(*b*) *Years* 1938–39 *and* 1942–43 *to* 1945–46. The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938–39 and 1942–43 to 1945–46.

LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES.

Year.	N.S.W.(*a*)	Victoria.(*b*)	Q'land.	S. Aust.(*c*)	W. Aust.(*d*)	Tas.(*c*)	Total.
	£	£	£	£	£	£	£
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938–39 ..	10,657,409	6,070,551	(*c*)4,177,632	1,578,688	1,447,154	518,755	24,450,189
1942–43 ..	(*e*)	5,641,982	(*e*)	1,403,364	(*f*)1,382,105	530,876	(*e*)
1943–44 ..	(*e*)	5,566,219	(*e*)	1,368,639	(*f*)1,400,380	529,886	(*e*)
1944–45 ..	9,015,895	5,608,618	(*c*)4,577,539	1,408,048	(*f*)1,368,044	551,634	22,529,778
1945–46 ..	9,256,534	5,904,597	(*e*)	1,554,280	1,441,370	597,945	(*e*)
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938–39 ..	10,790,273	6,192,859	(*c*)4,334,634	1,558,169	1,489,079	506,976	24,871,990
1942–43 ..	(*e*)	4,984,390	(*e*)	1,222,129	(*f*)1,237,193	514,291	(*e*)
1943–44 ..	(*e*)	5,106,856	(*e*)	1,283,542	(*f*)1,311,488	529,531	(*e*)
1944–45 ..	8,956,007	5,344,471	(*c*)4,564,402	1,385,934	(*f*)1,346,459	534,915	22,132,188
1945–46 ..	9,260,781	6,218,046	(*e*)	1,632,714	1,594,069	622,311	(*e*)

(*a*) Years ended previous 31st December. (*b*) Years ended 30th September. (*c*) Years ended 30th June. (*d*) Municipalities—Years ended 31st October ; Road Districts—Years ended 30th June. (*e*) Not available. (*f*) Includes loan receipts and expenditure of Local Boards of Health.

(iii) *Business Undertakings.* (*a*) *Details.* The table hereunder shows the latest particulars available of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS, 1944–1946.

Particulars.	N.S.W. 1945.	Victoria. 1945–46.	Q'land. 1944–45.	S. Aust. 1945–46.	W. Aust. 1945–46.	Tas. 1945–46.
REVENUE (EXCLUDING LOAN RECEIPTS).						
	£	£	£	£	£	£
Water Supply and Sewerage—						
Rates	556,775	(*a*)	12,484	..	5,635	172,479
Charges for Services and Sales of Products	205,579	(*a*)	1,390,608	936	7,374	50,498
Other (including Grants) ..	(*b*) 182,303	(*a*)	(*c*) 107,534	..	1,628	33,391
Total	944,657	57,003	1,510,626	936	14,637	256,368
Electricity and Gas—						
Rates	39,990	(*a*)	10,542	..	..	..
Charges for Services and Sales of Products	7,976,066	(*a*)	1,595,826	166,841	1,216,320	13,138
Other (including Grants) ..	85,820	(*a*)	123,352	4,829	11,430	657
Total	8,101,876	2,469,491	1,729,720	171,670	1,227,750	13,795
Railways, Tramways and Omnibuses—						
Rates	..	(*a*)	3,319	..	..	..
Charges for Services and Sales of Products ..	..	(*a*)	1,539,786	..	485	315,591
Other (including Grants) ..	..	(*a*)	81,870	..	..	1,377
Total	..	10,018	1,624,975	..	485	316,968
Other—	(*d*)	(*e*)		(*f*)	(*g*)	(*h*)
Rates	..	(*a*)	..	..	..	111
Charges for Services and Sales of Products	534,874	(*a*)	..	9,369	14,042	15,223
Other (including Grants) ..	1,605	(*a*)	..	892	2,491	864
Total	536,479	154,655	..	10,261	16,533	16,198
Grand Total	9,583,012	2,691,167	4,865,321	182,867	1,259,405	603,329

NOTE.—*See* next page for notes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS, 1944-1946.—*continued.*

Particulars.	N.S.W. 1945.	Victoria. 1945–46.	Q'land. 1944–45.	S. Aust. 1945–46.	W. Aust. 1945–46.	Tas. 1945–46.
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).						
	£	£	£	£	£	£
Water Supply and Sewerage—						
Working Expenses ..	434,388	(a)	478,947	743	4,617	68,664
Depreciation	− 14,109	(a)	..	..	..	..
Debt Charges	390,953	(a)	821,297	..	10,231	149,738
Other (including Transfers to General Revenue and Construction)	12,093	(a)	170,312	..	..	28,105
Total	823,325	55,564	1,470,556	743	14,848	246,507
Electricity and Gas—						
Working Expenses ..	5,201,086	(a)	1,056,180	120,753	954,002	10,421
Depreciation	918,172	(a)	..	..	101,825	..
Debt Charges	1,310,243	(a)	286,243	7,879	48,187	39
Other (including Transfers to General Revenue and Construction)	305,577	(a)	241,085	24,788	41,310	50
Total	7,735,078	2,417,181	1,583,508	153,420	1,145,324	10,510
Railways, Tramways and Omnibuses—						
Working Expenses ..	..	(a)	936,267	..	504	215,656
Depreciation	..	(a)	..	..	..	..
Debt Charges	..	(a)	228,437	..	..	52,483
Other (including Transfers to General Revenue and Construction) ..	..	(a)	164,988	..	..	51,439
Total	..	9,336	1,329,692	..	504	319,578
Other—	(d)	(e)		(f)	(g)	(h)
Working Expenses ..	491,300	(a)	..	8,258	13,663	11,117
Depreciation	402	(a)	..	..	394	..
Debt Charges	17,863	(a)	..	1	413	3,669
Other (including Transfers to General Revenue and Construction)	213	(a)	..	515	2,000	2,122
Total	509,778	186,649	..	8,774	16,470	16,908
Grand Total	9,068,181	2,668,730	4,383,756	162,937	1,177,146	593,503

(a) Not available separately. (b) Includes £63,213 Government grant for part of cost of new works borne by Government. (c) Includes Government subsidy of loans. (d) Abattoirs and Ice Works. (e) Hydraulic Power Undertaking, Quarries and Abattoirs. (f) Quarries. (g) Quarries, Ice Works, Cinema and Abattoirs. (h) Abattoirs.

NOTE.—Minus sign (−) indicates an excess of credits.

(b) *Years* 1938–39 *and* 1942–43 *to* 1945–46. This table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938–39 and 1942–43 to 1945–46.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS.

Year.	N.S.W.(*a*)	Victoria.(*b*)	Q'land.	S. Aust.(*c*)	W. Aust.(*d*)	Tas.(*c*)	Total.
	£	£	£	£	£	£	£
			REVENUE (EXCLUDING LOAN RECEIPTS).				
1938–39 ..	6,405,010	1,813,796	(*c*)3,373,966	113,132	962,470	528,461	13,196,835
1942–43 ..	(*e*)	2,420,520	(*e*)	145,352	1,006,726	659,157	(*e*)
1943–44 ..	(*e*)	2,510,079	(*e*)	153,072	1,079,175	682,766	(*e*)
1944–45 ..	9,323,148	2,674,803	(*c*)4,865,321	174,422	1,137,903	595,984	18,771,581
1945–46 ..	9,583,012	2,691,167	(*e*)	182,867	1,259,405	603,329	(*e*)
			EXPENDITURE (EXCLUDING LOAN EXPENDITURE).				
1938–39 ..	5,556,123	1,802,972	(*c*)3,256,263	123,356	935,052	513,666	12,187,432
1942–43 ..	(*e*)	2,339,587	(*e*)	130,398	970,982	628,917	(*e*)
1943–44 ..	(*e*)	2,429,326	(*e*)	146,579	1,031,757	655,381	(*e*)
1944–45 ..	8,805,878	2,515,912	(*c*)4,383,756	154,161	1,076,958	574,770	17,511,435
1945–46 ..	9,068,181	2,668,730	(*e*)	162,937	1,177,146	593,503	(*e*)

NOTE.—*See* notes to corresponding table on Ordinary Services.

(iv) *Loan Expenditure.* (*a*) *Details.* The table below shows particulars for the latest year available of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1944-46.

Particulars.	N.S.W. 1945.	Victoria. 1945–46.	Q'land. 1944–45.	S. Aust. 1945–46.	W. Aust. 1945–46.	Tas. 1945–46.
			ORDINARY SERVICES.			
	£	£	£	£	£	£
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage	43,693	57,122	64,212	23,864	14,601	25,141
Council Properties	35,615	12,571	3,735	20,518	5,745	
Parks, Gardens and Recreational Reserves	60,565	7,651	..	..	..	
Other	4,695	37,477	24,284	..	5,000	
Total	144,568	114,821	92,231	44,382	25,346	25,141
			BUSINESS UNDERTAKINGS.			
	£	£	£	£	£	£
Water Supply	133,635	4,917	154,306	..	..	43,978
Sewerage	6,761	..	13,029	..	..	
Electricity and Gas	259,114	202,467	54,324	..	2,500	
Railways, Tramways and Omnibuses	..	..	..	..	..	
Other	26,376	3,981	..	..	..	
Total	425,886	211,365	221,659	..	2,500	43,978
Grand Total	570,454	326,186	313,890	44,382	27,846	69,119

(*b*) *Years* 1938–39 *and* 1942–43 *to* 1945–46. The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938–39 and 1942–43 to 1945–46.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE ON WORKS.

Year.	N.S.W.(*a*)	Victoria.(*b*)	Q'land.	S. Aust.(*c*)	W. Aust.(*d*)	Tas.(*c*)	Total.
			ORDINARY SERVICES.				
	£	£	£	£	£	£	£
1938–39 ..	1,757,704	662,986	(*c*) 1,316,651	43,479	117,172	39,481	3,937,473
1942–43 ..	(*e*)	59,384	(*e*)	2,668	(*f*) 2,205	1,976	(*e*)
1943–44 ..	(*e*)	69,509	(*e*)	689	(*f*) 1,494	4,272	(*e*)
1944–45 ..	93,220	(*e*)	(*c*) 92,231	10,925	(*e*)	16,727	(*e*)
1945–46 ..	144,568	114,821	(*e*)	44,382	25,346	25,141	(*e*)
			BUSINESS UNDERTAKINGS.				
	£	£	£	£	£	£	£
1938–39 ..	1,481,484	452,374	(*c*) 941,911	9,542	76,280	232,687	3,194,278
1942–43 ..	(*e*)	132,461	(*e*)	..	(*f*) 1,500	124,081	(*e*)
1943–44 ..	(*e*)	89,417	(*e*)	..	(*f*)	92,811	(*e*)
1944–45 ..	419,180	(*e*)	(*c*) 221,659	4,500	(*e*)	97,228	(*e*)
1945–46 ..	425,886	211,365	(*e*)	..	2,500	43,978	(*e*)

(*a*) Years ended previous 31st December. (*b*) Years ended 30th September. (*c*) Years ended 30th June. (*d*) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (*e*) Not available. (*f*) Excludes Local Boards of Health.

3. **Local and Semi-Governmental Authorities' Debt.**—Previous issues of the Official Year Book (*see* No. 36, page 595) have contained particulars of Local and Semi-Governmental Debt up to and including 1940–41. Similar information is not yet available for later years, but it is hoped to include it in the next issue. A summary of the debt of municipal and semi-governmental bodies to persons and institutions other than central Governments at 30th June, 1947 is shown in Chapter XV.—Public Finance, C, para. 3 (v).

§ 3. Roads and Bridges.

1. **New South Wales.**—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. The funds of this authority (now the Department of Main Roads) are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government from the proceeds of a tax on petrol, direct contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. *See* paragraph (iii) (*b*) for details of receipts and payments.

The Main Roads Department exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways. Assistance is granted by the department in respect of the following five classes of roads :—

State Highways.—Roads which are principal avenues of communication between the coast and the interior or throughout the State, and connect with such avenues in other States.

Trunk Roads.—Roads which, being secondary avenues of road communication, form with the State Highways the framework of general system of intercommunication throughout the State.

Ordinary Main Roads.—Roads which are used principally by through traffic as the means of intercommunication between towns or important centres of population and which, with the State Highways and Trunk Roads, form part of the general system of road communication throughout the State.

Secondary Roads.—Roads in the metropolitan area of Sydney which carry a substantial amount of through traffic and relieve neighbouring main roads of traffic which they would otherwise have to bear.

Developmental Roads.—Roads which serve to develop a district or area of land by improving or providing access to a railway station or a shipping wharf, or to a road leading to a railway station or a shipping wharf.

In the Eastern Division of the State assistance is given to local councils for works on classified roads. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and reconstruction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The length of roads maintained by the Department of Main Roads at 30th June, 1946 (excluding the Western Division) was 2,561 miles (15 per cent.), while the length maintained by Councils was 14,642 miles (85 per cent.).

In the Western Division 7,706 miles (excluding 18 miles maintained by the Bourke and Broken Hill Municipal Councils) were maintained by the Department.

(ii) *Length of Roads.* The following particulars show lengths of road according to (*a*) type of road and (*b*) composition :—

(*a*) *Type.*	Miles.
Eastern Division—	
Proclaimed Roads (30th June, 1946)—	
State Highways	5,147
Trunk Roads	2,367
Ordinary Main Roads	9,611
Secondary Roads	78
Developmental Roads	2,749
Total	19,952
Minor Roads (30th June, 1939)	98,339
Western Division (30th June, 1946)	7,905
Total	126,196

(*b*) *Composition.*	Miles.
	(30th June, 1939)
Wood block	32
Cement concrete	332
Asphaltic concrete	248
Tar or bituminous macadam	3,282
Surfaced water-bound macadam or gravel	2,591
Water-bound macadam	3,684
Gravel or crushed rock	27,037
Formed only	25,091
Cleared or natural surface only	63,761
Total	126,058

(iii) *Main Roads Department.* (*a*) *General.* An amendment to the Main Roads Act in 1945 provides for the co-ordination between public authorities in the construction of new road projects estimated to cost over £5,000. Shire, municipal and government departments will be required to submit details of these projects to the Commissioner for Main Roads in order to co-ordinate councils' road works with the planned development of the State main roads system. Provision was also made for the Department to exercise greater control, in the interest of safety, over advertising signs on main roads, and for the referring to the Department of proposed new road connexions with main roads in order to avoid unnecessary junctions. Other provisions relate to a new classification of main roads as " motor ways ", and to the proclamation of main road reserves.

In December, 1944, the Department of Main Roads organization, after completion of the work allotted to it, was withdrawn from the Northern Territory, where it had played an important part in the construction of the north-south road (Stuart Highway) connecting Alice Springs and Darwin. The following summary shows the main road works carried out there in each of the years 1940 to 1944 :—

1940.—Construction of Dunmara–Larrimah portion of road, 86.5 miles.

1941.—Construction of major part of road Darwin–Adelaide River, 68.5 miles, to a standard to meet military requirements.

1942.—Construction of road Adelaide River–Katherine, 148 miles, including bridges south of Katherine.

1943.—Maintenance of Darwin–Larrimah section, 332 miles, and bituminous surfacing of part of the road.

1944.—Construction of access roads to aerodromes and completion of bituminous resurfacing and surfacing of road from Darwin towards Pine Creek, 114 miles.

The total cost of the works carried out by the Department in the Northern Territory during the period 1940 to 1944 was £2,784,000.

Despite efforts to commence works of construction or reconstruction on main roads in the County of Cumberland, progress during 1945–46 was inconsiderable because of causes arising out of the war. In the country, preference was given chiefly to works which had been in hand, but were discontinued because of the war. Maintenance work was carried out as well as shortages and high costs of certain materials permitted, and a limited number of developmental works was commenced. Special defence works were carried out on a reduced scale during 1945–46, and the Department undertook to construct streets of access to dwellings being erected by the State Housing Commission.

Investigation and planning to provide for the present and future needs of road traffic in the County of Cumberland, in Newcastle and district, and in the Wollongong–Port Kembla district which was commenced in 1943 with very limited staff, was continued during 1945–46.

(*b*) *Receipts and Payments.* The receipts and payments of the Department of Main Roads for the four years 1942–43 to 1945–46 compared with the income and expenditure for 1938–39 are shown below. The particulars include extensive defence works, whose cost to 30th June, 1946 amounted to £7,546,158, constructed in New South Wales and elsewhere on behalf of the Commonwealth Government. Commencing with the year 1941–42 a change was made to a receipts and payments system of accounting :—

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS.

Item.	1938–39. (a)	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.					
	£	£	£	£	£
Motor Tax Fees, etc.	2,018,555	1,644,126	1,758,057	1,845,377	2,024,947
Petrol Taxation (Federal Aid Roads and Works Acts) ..	1,176,039	440,031	143,958	536,509	873,425
Councils' direct contributions ..	250,679	242,052	237,972	242,021	222,097
Loans from State Government ..	302,643	50,000	..	..	300,000
Contributions from Revenue, State Government	..	−1,461	−2,320	−4,830	1,007
Commonwealth Funds for Defence Works	..	3,776,425	2,033,340	633,312	77,337
Hire of Plant and Motor Vehicles	..	220,306	206,999	161,662	131,389
Suspense Accounts	..	..	3,966	73,636	..
Other	68,332	193,821	211,889	136,713	141,082
Total	3,816,248	6,565,300	4,593,861	3,624,400	3,771,284
PAYMENTS.					
	£	£	£	£	£
Roads and Bridges in New South Wales—					
Construction	*b*1,736,898	596,302	465,097	444,164	561,185
Maintenance	*b*1,519,929	1,121,456	1,552,390	1,609,678	1,811,500
Debt Charges—					
Interest, Exchange, etc. ..	152,469	178,499	164,672	163,656	152,129
Sinking Fund and Repayments	200,591	129,735	150,234	101,940	97,495
Defence Works (*c*)	(*b*)	3,717,719	1,343,043	989,603	186,327
Suspense Accounts	..	135,747	7,525	..	67,822
Administration, etc.	(*b*)101,497	319,235	376,680	373,889	600,785
Total	3,711,384	6,198,693	4,059,641	3,682,930	3,477,243

(*a*) Income and expenditure. (*b*) Not fully comparable with corresponding figures in following years. (*c*) Includes maintenance and construction, respectively, of roads and bridges outside New South Wales—£665,091 and £2,661,572 to 30th June, 1946.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1946, receipts amounted to £77,330,727 and payments to £74,729,342. Particulars of the individual funds are—County of Cumberland, receipts £21,706,585, payments £20,137,133; Country, £52,410,721, £51,423,810; Developmental, £3,213,421, £3,168,399.

The total expenditure on roads streets and bridges in the State by all authorities during the years 1938–39 and 1942–43 to 1945–46 was, respectively, £8,894,099, £3,614,502, £4,251,306, £4,606,189 and £5,251,638. These figures are approximate, and, for the years 1942–43 and 1943–44, subject to revision. They include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1946, was £9,746,329, but this amount will be reduced by approximately £138,000 upon the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years, ending approximately in 1985. The accumulated balance of the Bridge Account to 30th June, 1946, showed a deficiency of £545,241. The following table shows income and expenditure for the years 1938–39 and 1942–43 to 1945–46 :—

SYDNEY HARBOUR BRIDGE, NEW SOUTH WALES : INCOME AND EXPENDITURE.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
INCOME.					
	£	£	£	£	£
Road Tolls	278,297	126,411	131,156	150,370	225,554
Railway Passenger Tolls ..	103,697	111,336	116,184	119,253	134,005
Tram and Omnibus Passenger Tolls	38,738	24,404	24,886	25,401	25,547
Other	8,366	8,810	9,009	7,518	8,621
Total	429,098	270,961	281,235	302,542	393,727
EXPENDITURE.					
	£	£	£	£	£
Maintenance and Improvement ..	36,739	25,485	24,135	24,889	32,013
Special War Expenditure ..	..	15,891	8,811	2,788	563
Interest, Exchange, etc. ..	334,797	319,423	313,663	315,300	309,286
Sinking Fund	40,564	52,279	55,097	65,465	66,608
Other	12,194	10,642	11,063	11,434	12,737
Total	424,294	423,720	412,769	419,876	421,207

During 1945–46, 25,899,000 rail travellers, 23,299,000 tram and omnibus travellers, and 9,779,000 road travellers in 5,515,000 road vehicles crossed the bridge.

2. **Victoria.**—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads and Streets.* The approximate length of all roads and streets in Victoria at the end of 1945, according to composition, was as follows :—

	Miles.
Wood or stone	67
Portland cement concrete	146
Asphaltic concrete and sheet asphalt	223
Tar or bitumen surface seal	8,973
Waterbound macadam, gravel, sand and hard loam pavements ..	26,062
Formed only	24,842
Surveyed only	43,085
Total	(*a*)103,398

(*a*) Includes 2,909 miles State Highways.

(iii) *Country Roads Board.* (*a*) *General.* The end of the war brought about a reduction in the expenditure on defence works carried out by the Victorian Country Roads Board. The total expenditure on these works to 30th June, 1946, was £6,135,537, of which £2,454,534 was spent on works in Central Australia and Northern Territory. The works included the strengthening and sealing of the North-South Road (Stuart Highway), aerodrome construction, and surfacing at various places.

Reconstruction and maintenance of State highways and main roads were restricted during 1945–46 because of post-war difficulties, and the work done was confined strictly to what was essential. Provision was made for linking up sections of developmental roads on which funds had already been spent, and for completing short lengths of road of an urgent nature.

(*b*) *Receipts and Payments.* Funds created under the Act were the Country Roads Board Fund, the Loan Account and the Developmental Roads Loan Account. Particulars of the operations of these funds, together with those of the Federal Aid Roads and Works Account, are given hereunder :—

Country Roads Board Fund. All fees (other than fees for licences to drive motor cars) and fines under the Motor Car Act, and all registration fees and fines for traction engines, less cost of collection of such fees and fines, are credited to this fund. Particulars of receipts and payments connected with Commonwealth Defence Works are not included therein, but some detail on expenditure may be found on the following page. The total receipts and payments for the years 1938–39 and 1942–43 to 1945–46 were as follows :—

COUNTRY ROADS BOARD FUND, VICTORIA : RECEIPTS AND PAYMENTS.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.					
	£	£	£	£	£
Fees, etc., Motor Car Act ..	1,690,962	1,248,426	1,344,524	1,395,225	1,558,480
Municipalities' Payments ..	318,878	244,756	225,653	241,764	264,506
Stores and Materials	233,104	286,366	270,121	254,451	214,569
Hire of Plant	53,724	58,627	104,333	108,647	98,782
Other	117,341	272,398	224,287	125,636	173,227
Total	2,414,009	2,110,573	2,168,918	2,125,723	2,309,564

COUNTRY ROADS BOARD FUND, VICTORIA: RECEIPTS AND PAYMENTS—*continued.*

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
PAYMENTS.					
	£	£	£	£	£
Maintenance of Roads and Murray River Bridges and Punts ..	1,205,069	521,588	649,275	737,812	836,707
Relief to Municipalities ..	240,170	221,040	221,040	221,040	221,040
Interest, Sinking Fund, etc.—Recoup to Consolidated Revenue—					
Interest, etc.	282,484	317,683	317,352	315,790	311,769
Sinking Fund	25,794	25,786	25,717	25,567	25,424
Municipalities' Repayments, etc.	119,167	111,258	109,604	107,975	106,413
Plant, Stores and Materials ..	310,332	445,614	336,844	314,686	479,371
Other (including Administration)	230,125	289,364	287,918	183,979	318,365
Total	2,413,141	1,932,333	1,947,750	1,906,849	2,299,089

Country Roads Board Loan Account. Loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways. During the years ended 30th June, 1945 and 1946 there were no transactions. The total expenditure to 30th June, 1946, was £5,047,126.

Developmental Roads Loan Account. This fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan moneys raised were exhausted at 30th June, 1937, the total expenditure at that date being £6,425,757.

Federal Aid Roads and Works Account. Revenue and expenditure in respect of the Federal Aid Roads and Works Account, particulars of which are not included above, were as follows :—

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£	£	£	£	£
Revenue	716,019	276,883	309,748	370,789	548,934
Expenditure	781,088	136,682	158,555	235,419	234,386

Total Expenditure. The total expenditure by the Board on road construction and maintenance during each of the five years 1938–39 and 1942–43 to 1945–46 was as follows :—

COUNTRY ROADS BOARD : EXPENDITURE ON ROADS.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£	£	£	£	£
State Highways (*a*)	453,708	203,964	240,729	251,048	261,956
Main Roads (*a*)	1,027,210	329,544	422,888	534,500	591,118
Developmental Roads (*a*) ..	468,122	88,020	94,526	153,081	148,588
Tourists' Roads (*a*)	77,694	27,880	44,479	30,487	53,786
Forests' Roads	..	..	..	..	8,021
Murray River Bridges and Punts	4,067	2,555	3,635	4,115	7,623
Roads adjoining Commonwealth Areas	13,321	5,407	1,572	3,598	381
Unemployment Relief	54,662	20	..	..	..
Commonwealth Defence Works—					
Unemployment Relief ..	..	9,443	5,106	1	..
Northern Territory	..	670,102	894,436	751,341	6,758
Allied Works Council ..	..	43,842	20,991	*Cr.* 25,962	*Cr.* 14,072
Total	2,098,784	1,381,677	1,728,362	1,702,209	1,064,159

(*a*) Includes amounts contributed by the Commonwealth Government under the provisions of the Federal Aid Roads and Works Acts.

3. **Queensland.**—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, farmers', mining access and tourist roads or tourist tracks, and, under certain circumstances, to undertake their construction and maintenance. With the exception of State highways, mining access roads or tourist tracks, no road can be proclaimed until the Commission has considered any objections thereto lodged by interested local authorities.

Certain major roads are constructed and maintained by the Main Roads Commission with assistance from the local authorities, while roads of local importance are constructed and maintained solely by these authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* The total length of roads and streets in Queensland at 30th June, 1946, was—

	Miles.
Concrete	71
Bitumen	3,328
Macadam	7,209
Other formed	42,998
Unconstructed	78,603
Total	132,209

Roads gazetted by the Main Roads Commission as at 30th June, 1946, and their respective lengths were :—State highways, 6,983 miles ; main roads, 9,932 miles ; developmental roads, 244 miles ; tourist roads, 247 miles ; other roads, 1,033 miles ; total, 18,439 miles.

(iii) *Main Roads Commission.* (*a*) *General.* Among the more important defence road works carried out by the Queensland Main Roads Commission was the construction of the middle section (99 miles) of the Birdum–Tennant Creek Road (304 miles), in the Northern Territory, the remainder of the road being built by the Department of Main Roads, New South Wales (the northern 85 miles), and the Highways Department, South Australia (the southern 120 miles). The new route of the North-South Road, whose entire length from Alice Springs to Darwin is 954 miles, was constructed as far as possible on sounder, higher and better drained country than the old route, which generally followed the overland telegraph line over open plain country. The Queensland section was constructed in 88 days, the total cost being about £64,000. The total cost of the entire road was £2,840,000. Another important road work was the construction of the Tennant Creek (N.T.)–Mount Isa (Qld.) Road (403 miles). Preliminary work of clearing and formation of the 286 miles from Camooweal on the Queensland border to the junction with the North-South Road was completed in 52 working days, and metalling was commenced before the entry of Japan into the war. The construction of the section in Queensland from Mount Isa to Camooweal had been previously under way, but the organization on this job had been reinforced and transferred across the border to complete the Northern Territory section first. The advent of the Japanese into the war made necessary a first-class all-weather highway, and in March, 1942 the organization was built up to meet the new conditions. The gravelling of the whole length was completed in February, 1943, and the bitumen surfacing in April, 1944. Construction included the erection of eight bridges on major water-ways, concrete slab crossings of all other important creeks, and the sinking and equipping of 22 bores. The cost of the road was £1,100,000. Other defence road work was the construction of the Ipswich–Duaringa section of the Inland Defence Road (the portion from Duaringa to Charters Towers being constructed by the Department of Main Roads, New South Wales), the Charleville–Blackall Road, the Banana–Gladstone Road, and the Toowoomba–Landsborough lateral defence road, all forming part of the strategic road construction plan. The Inland Defence Road, 875 miles in length, cost £2,127,000, and the Charleville–Blackall Road, 187 miles, cost about £285,000. The other two roads were each about 80 or 90 miles long. In addition to these roads, about 200 miles of roads, at an approximate cost of £350,000, were constructed on the Atherton Tablelands.

Apart from road works, extensive work was carried out in the construction and maintenance of aerodromes, a flying-boat base, landing-strips, shipping slipways, jetties, gun emplacements and ammunition storages. A graving dock, involving the expenditure of over £1,000,000, was constructed on the Brisbane River. With the cessation of hostilities in the Pacific, works for the Services and the Commonwealth practically ceased, although a few jobs, principally at aerodromes, have since been requested.

The extent of the Commission's activities can be gauged by the following figures of disbursements in connexion with defence work, including the purchase of plant and materials, during the years 1939–40 to 1945–46, and the total to 30th June, 1946 :—

	£
1939–40	284,000
1940–41	303,000
1941–42	2,197,000
1942–43	10,576,000
1943–44	12,001,000
1944–45	2,760,000
1945–46	792,000
Total	28,913,000

During 1945–46 (1944–45 in brackets), the Commission completed 107 (122) miles of new roadway, while 68 (89) miles of previously improved road were further improved in process of stage construction. At the end of the year a programme involving 243 (150) miles of new work, and 292 (152) miles of stage construction was in hand or authorized. The total length of road constructed from the inception of Main Roads operations to 30th June, 1946 (1945 in brackets) was 8,424 (8,316) miles. Bridges of all types to a length of 2,120 (1,021) lineal feet were constructed during 1945–46 (1944–45), bringing the total constructed by the Commission to 137,807 (135,687) feet, approximately 26 miles. In addition, at 30th June, 1946 (1945), 4,635 (2,450) feet were under construction.

The total mileage of roads controlled by the Commission at 30th June, 1946 (1945) was 18,439 (17,183).

(*b*) *Receipts and Payments.* The funds of the Main Roads Commission are obtained chiefly from motor vehicle registration and transport licensing fees, contributions from the Federal Aid Roads and Works Fund, loans from the State Treasury, and the Developmental Works and Projects Fund. The total receipts and payments, including amounts for defence works, during each of the years 1938–39 and 1942–43 to 1945–46 are shown below :—

MAIN ROADS COMMISSION, QUEENSLAND : RECEIPTS AND PAYMENTS.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.					
	£	£	£	£	£
Motor Vehicle Registration Fees, Transport Licensing Fees, Endorsement Fees, etc. ..	938,227	739,319	809,384	835,109	962,601
Treasury Payments (including Loans)	972,000	975,244	1,288,891	868,755	818,730
Federal Aid Roads and Works Acts	806,218	301,979	337,152	402,229	596,564
Commonwealth and Allied Defence Works	..	11,115,819	8,769,411	2,418,722	464,892
Maintenance Repayments—Local Authorities	98,154	116,018	93,368	103,660	138,133
Other	288,330	153,000	157,478	169,484	178,123
Total	3,102,929	13,401,379	11,455,684	4,797,959	3,159,043
PAYMENTS.					
	£	£	£	£	£
Road Works and Surveys ..	2,045,900	1,059,312	457,892	602,102	668,484
Maintenance of Roads	331,734	308,772	368,002	643,411	639,612
Port Development Works ..	..	314,019	403,730	158,799	46,910
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,963	687,753	Cr. 81,451	114,330	341,438
Redemption—Main Roads Loans	38,861	84,667	96,981	289,691	314,353
Interest	78,153	152,920	169,368		
Payments to State Consolidated Revenue	340,244	78,127	85,432	93,637	107,837
Payments to Local Authorities ..	27,418	22,205	25,183	29,709	32,782
Commonwealth and Allied Defence Works	..	9,373,576	9,267,982	2,378,099	721,174
Administration, etc.	149,619	185,991	175,281	174,686	209,441
Other	1,750	981	2,941	44,029	92,549
Total	3,087,642	12,268,323	10,971,341	4,528,493	3,174,580

4. **South Australia.**—(i) *General.* The Highways Act 1926–44 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available ; in doing which he has to take into account (*a*) the moneys voted or likely to be voted by Parliament for main roads ; (*b*) whether the road is or will be the main trunk route (i) connecting with its market or nearest port or railway station any large producing area or any area capable of becoming in the near future a large producing area, (ii) connecting two or more large producing areas, or areas capable of becoming in the near future large

producing areas, or between two or more large centres of population, (iii) between the capital and any large producing area or any large centre of population, (iv) between the capital of the State and that of any other State; and (c) whether the area through which the road passes is, or in the near future will be, sufficiently served by a railway or railways.

After providing for certain fixed charges the Highways Fund is credited with the balance received from (a) licence fees and registration fees under the Road Traffic Act 1934–44; (b) fees for hawkers' licences; and (c) all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Federal Aid Roads and Works scheme are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic within local governing areas at 30th June, 1946, was as follows:—

	Miles.
Wood or stone paved	9
Bituminous or cement concrete	294
Bituminous or cement penetration	2,122
Tar paved, metalled or gravelled	14,640
Formed only	8,823
Surveyed but not formed	26,310
Total	52,198

Of this total 7,554 are main roads and 44,644 district roads. The Highways Department has improved 2,250 miles to modern types.

(iii) *State Highways and Local Government Department.* (a) *General.* During the war the South Australian Highways and Local Government Department, in common with other State road organizations, carried out considerable road and other defence work on behalf of the Commonwealth. The cost of this work, which was reimbursed by the Commonwealth, was as follows:—

	£		£
1940–41	190,032	1944–45	46,588
1941–42	563,796	1945–46	2,723
1942–43	527,352		
1943–44	62,796	Total	1,393,287

The various projects undertaken included work on the North-South and East-West Roads.

A programme has been prepared of road works proposed to be carried out during the period of five years after the cessation of hostilities. This provides for the reconstruction of approximately 2,850 miles of main roads throughout the State at an estimated cost of more than £3,000,000, the greater proportion of which will be provided from motor vehicle taxation. The programme includes (i) the realignment and widening of roads constructed in the early stages of the first five-year plan (prepared in 1936, but suspended because of the war), now below the accepted standard necessary for modern traffic, (ii) the construction or reconstruction of existing unimproved main roads, and (iii) the construction of roads to assist development in the newer settled areas, with particular reference to the south-eastern part of the State. Heavy plant is being acquired for these purposes, and it is expected that the work will be well on the way at an early date.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments during the years 1942–43 to 1945–46 of funds controlled by the Highways and Local Government Department. Comparable figures for 1938–39 are not available.

STATE ROADS (ALL FUNDS COMBINED), SOUTH AUSTRALIA: RECEIPTS AND PAYMENTS.

Item.	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.				
	£	£	£	£
Motor Vehicle Registrations, Fees, Fines, etc.	532,310	541,088	569,380	612,349
Federal Aid Roads and Works Acts	180,706	203,292	241,112	354,050
Commonwealth Defence Road Works (*a*)	14,898	6,079	428	..
Recoups—Local and Semi-governmental Authorities	1,731	5,900	9,923	1,945
Suspense Accounts—Plant, Machinery, etc.	100,829	..	..	..
Other	3,623	3,110	4,914	5,318
Total	834,097	759,469	825,757	973,662
PAYMENTS.				
	£	£	£	£
Construction of Roads and Bridges	126,503	210,001	219,961	270,936
Maintenance	116,125	129,958	112,636	123,047
Recoups to Consolidated Revenue Fund—Interest, Sinking Fund and Exchange	188,307	186,677	184,322	177,295
Grants to Local and Semi-governmental Authorities	120,452	141,318	174,106	211,575
Administration	31,160	31,434	33,134	40,971
Suspense Accounts	..	13,806	23,820	90,657
Other	1,363	1,494	1,441	1,652
Total	583,910	714,688	749,420	916,133

(*a*) Part only. *See* above.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938–39 and 1942–43 to 1945–46 was, respectively, £1,966,000, £953,000, £1,141,000, £1,198,000 and £1,461,000.

5. **Western Australia.**—(i) *General.* In Western Australia the construction, maintenance and management of roads, streets and bridges are the functions of Municipalities and Road Districts.

(ii) *Length of Roads and Streets.* Certain principal highways and developmental roads are proclaimed main roads under the control of the Commissioner of Main Roads, appointed under the Main Roads Act 1930–39. The total known length of streets and roads in existence in the various Municipalities at 31st October, 1946, and in Road Districts at 30th June, 1946, was as follows:—

	Miles.
Concrete	5
Bituminous	2,925
Granite, limestone, etc., waterbound	321
Gravel waterbound	9,742
Other constructed surfaces	232
Formed only	27,286
Unprepared	(*a*) 33,737
Total	74,248

(*a*) Incomplete.

During the war the East-West Road (Forrest Highway) was built, at a cost of £300,000. The road is 1,074 miles long and connects Port Augusta, South Australia to Norseman, Western Australia. Work was also carried out on the Meekatharra–Marble Bar Road, 462 miles, connecting the railway town of Meekatharra to the rail-head at Marble Bar. The work consisted mainly of strengthening the existing road, deviating where necessary, and raising it in certain parts.

(iii) *Receipts and Payments.* The following table shows the combined transactions of the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, the Transport Co-ordination Fund and the Federal Aid Roads and Works Account during the years ended 30th June, 1939 and 1943 to 1946.

ROAD FUNDS, WESTERN AUSTRALIA: RECEIPTS AND PAYMENTS.

Item.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.					
	£	£	£	£	£
Motor Vehicle Licence Fees and Permits—					
Metropolitan Traffic Trust Account	197,951	152,913	150,228	157,133	152,593
Transport Co-ordination Fund	21,011	31,267	31,940	33,478	37,166
Commonwealth Grant—Federal Aid Roads and Works ..	823,162	320,043	334,017	399,434	594,787
Other (*a*)	1,958	1,227	1,770	−18,386	620
Total	1,044,082	505,450	517,955	571,659	785,166
PAYMENTS.					
	£	£	£	£	£
Road Construction, Maintenance, Surveys, etc.	922,756	167,188	190,591	268,216	353,508
Distributions to Local and Statutory Authorities	143,544	116,183	115,415	113,842	126,686
National Debt Commission Sinking Fund	17,623	17,623	..	..	..
Transfer to State Consolidated Revenue	..	26,861	28,942	30,696	33,643
Interest, Sinking Fund and Premiums—State Treasury ..	7,616	7,616	7,616	7,616	7,616
Administration, Plant, etc. ..	52,176	35,519	25,103	25,079	24,863
Other	1,558	2,721	2,563	2,589	2,788
Total	1,145,273	373,711	370,230	448,038	549,104

(*a*) Includes net transfers to and from other funds.

6. **Tasmania.**—(i) *General.* In Tasmania the cost of construction of roads and bridges is borne almost entirely by the State Government. During 1945–46 the expenditure of the Public Works Department on roads, tracks and bridges amounted to £347,767, of which £314,715 was charged to road funds, £16,640 to revenue, £15,889 to loan, and £523 to crown lands funds. Roads were amongst the large range of defence works, valued at £1,604,925, carried out by the Department during the war. Others included water supply, sewerage and drainage, buildings, aerodrome construction, ship repair and construction and fuel storage.

Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Federal Aid Roads and Works Grant, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads will be borne by the Transport Commission. It will also be responsible for a proportion of the cost of maintenance of main and secondary roads. Municipal councils will bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads, except in special cases. Roads controlled by the Commission at 30th June, 1946, were : State highways, 1,199 miles, main roads, 647 miles, secondary roads, 136 miles, tourist roads, 50 miles, developmental roads, 11 miles, total 2,043 miles.

(ii) *Length of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1942, was as follows :—

	Miles.
Sheet asphalt on concrete base	1
Other bituminous	788
Concrete	6
Granite, limestone, etc., waterbound	4,797
Surfaces of lower grade	6,794
Total	12,386

(iii) *Receipts and Payments.* The table hereunder shows particulars of the receipts and payments of the combined Road Fund and Federal Aid Roads and Works Funds under the control of the Transport Commission for the years 1939–40 and 1942–43 to 1945–46 :—

ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

Item.	1939–40.	1942–43.	1943–44.	1944–45.	1945–46.
RECEIPTS.					
	£	£	£	£	£
Motor Vehicle Registrations, Drivers' Licences and Motor Tax	193,165	179,361	194,306	204,685	219,486
Federal Aid Roads and Works Acts	220,241	76,448	87,271	105,032	155,416
Hire of Plant	..	16,104	15,628	73,183	..
Miscellaneous	719	6,489	9,664	12,737	19,650
Total	414,125	278,402	306,869	395,637	394,552
PAYMENTS.					
	£	£	£	£	£
Construction and Reconstruction of Roads	127,929	34,292	29,733	71,636	150,959
Maintenance and Improvement of State Highways	113,199	102,960	120,503	178,642	164,438
Renewals and Repairs of Bridges and Maintenance of Jetties ..	22,467	18,474	31,811		15,170
Other Road Works	2,995	47	709		
Other Works connected with Transport	5,748	7,735	8,045		
Administration	15,053	13,981	14,893	28,375	39,725
Miscellaneous	31,894	25,418	62,145	88,262	7,632
Total	319,285	202,907	267,839	366,915	377,924

(iv) *Hobart Bridge.* Under the Hobart Bridge (Acquisition and Administration) Act 1944 the Transport Commission has been responsible for the administration, control and management of the Hobart Bridge and transport services since 11th December, 1944. Receipts from bridge tolls from that date to 30th June, 1945 amounted to £13,306, and expenditure to £4,003. Capital expenditure amounted to £31,264. Corresponding figures for 1945–46 were £29,349, £8,065 and £22,641.

7. **Summary of Roads used for General Traffic.**—The following table represents an attempt to classify the roads used for general traffic in Australia, at the latest date available, according to States and to certain broad composition groups. The results are not entirely satisfactory, (i) because the whole of Australia is not covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable, State by State. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table are compiled from publications of the State Government Statisticians, and are derived mainly from local government sources. They therefore exclude the Territories of the Commonwealth and probably unincorporated areas in some States. Furthermore, the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent between States that it was considered preferable to show here only major divisions, rather than to attempt greater dissection, which would have resulted either in a lengthy total column incomplete for most of its items, or, by the expedient of " forcing ", in some mixed classes of little value. Even the broad classes shown suffer somewhat from this latter defect, but not to an extent sufficient to mar the table as a whole.

Groups 1–4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; gravel water-bound ; gravel or crushed rock ; tar paved, metalled and gravel ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States. This variety of classification is responsible, too, for some irregular grouping.

For details of any particular State, *see* the respective paragraphs in the preceding pages.

MILEAGE OF ROADS USED FOR GENERAL TRAFFIC.

Composition of Road.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	30th June, 1939.	31st Dec., 1945.	30th June, 1946.	30th June, 1946.	31st Oct., and 30th June, 1946. (*a*)	30th June, 1942.	
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1. Wood or stone ..	32	67	..	9	..	..	108
2. Concrete ..	580	369	71	294	5	7	1,326
3. Bituminous ..	5,873	8,973	3,328	2,122	2,925	788	24,009
4. Macadam and other ..	30,721	26,062	7,209	14,640	10,295	4,797	93,724
5. Formed only ..	25,091	24,842	42,998	8,823	27,286	(*b*)2,274	131,314
6. Cleared, or natural surface, only ..	63,761	43,085	78,603	26,310	33,737	(*b*)4,520	250,016
Total ..	126,058	103,398	132,209	52,198	74,248	12,386	500,497

(*a*) Municipalities and Road Districts respectively. (*b*) Approximate.

It will be seen from the foregoing table that less than one-quarter of the road lengths of Australia has actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.02 ; Group 2, 0.26 ; Group 3, 4.80 ; Group 4, 18.73 ; Group 5, 26.24 ; Group 6, 49.95. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 29 ; Victoria, 34 ; Queensland, 8 ; South Australia, 33 ; Western Australia, 18 ; Tasmania, 45. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

8. **Summary of Expenditure on Roads and Bridges.**—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local government bodies. Both State Government and local government bodies operate through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available, or they may be overlooked by the compiler. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than at present can be undertaken.

The two paragraphs following therefore represent only : (i) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (ii) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Sub-section 2. Finances, of the foregoing section on local government authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (*see* pages 518 and 521).

(ii) *Aggregate Expenditure from Road Funds.* The following table shows the expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938–39 and 1942–43 to 1945–46, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included.

ROADS AND BRIDGES: AGGREGATE EXPENDITURE FROM ROAD FUNDS.

Year ended 30th June—	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1939 ..	3,257	2,099	2,405	692	1,067	(*b*) 272	9,792
1943 ..	1,718	658	1,390	363	283	164	4,576
1944 ..	2,017	808	851	481	306	191	4,654
1945 ..	2,054	977	1,275	507	382	250	5,445
1946 ..	2,373	1,071	1,341	605	480	331	6,201

(*a*) Excludes Sydney Harbour Bridge. (*b*) Year 1939–40.

The figures above are not completely comparable as between States, and, in some States, as from year to year.

(iii) *State Net Loan Expenditure.* The following table shows the net loan expenditure by State Governments on roads and bridges during the years 1938–39 and 1942–43 to 1945–46, and also the aggregates to 30th June, 1946. Some of the expenditure included here is also included in the previous table.

ROADS AND BRIDGES: STATE NET LOAN EXPENDITURE.

Year ended 30th June—	N.S.W.	Victoria.(*a*)	Q'land.(*b*)	S. Aust.(*c*)	W. Aust.	Tasmania. (*d*)	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1939 ..	1,850	*Cr.* 22	357	200	145	141	2,671
1943 ..	10	*Cr.* 30	*Cr.* 13	*Cr.* 17	..	20	*Cr.* 30
1944 ..	*Cr.* 69	*Cr.* 31	164	*Cr.* 16	..	30	78
1945 ..	*Cr.* 43	*Cr.* 21	85	*Cr.* 17	..	16	20
1946 ..	284	*Cr.* 26	309	*Cr.* 16	..	16	567
Total to 30/6/46	21,097	(*e*) 12,667	7,058	3,809	3,183	5,855	53,669

(*a*) Represents expenditure from loan and on account of loan. (*b*) Amounts include relative expenditure by the Public Estate Improvement Branch. (*c*) Excludes credits arising from cancellation of securities redeemed from Sinking Fund. (*d*) Actual amounts expended by Department of Public Works. (*e*) Gross loan expenditure.

The loan expenditure shown above does not represent the total expenditure on roads and bridges. It relates for the most part to capital expenditure on new works, and it must be supplemented by similar expenditure from loan funds of local bodies and by expenditure by central road authorities and also from State revenues.

§ 4. Water Supply, Sewerage and Drainage.

1. **New South Wales.**—(i) *General.* The largest two domestic water supply and sewerage systems are controlled by statutory boards consisting of a president and a vice-president appointed by the State Government and other members elected by local councils. These are (*a*) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (*b*) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. At the end of 1944 five county councils had been created with authority to supply water to towns in constituent municipalities and shires, one of them being also empowered to conduct a sewerage system. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by municipal and shire councils.

(ii) *Water Supply—to 30th June*, 1946. (*a*) *Metropolitan.* The storage reservoirs of the metropolitan system, with a combined capacity of 125,144 million gallons, drain a catchment area of 376 square miles. Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and proposals exist for a dam to be built to a height of 342 feet above bed level, giving a safe draught of 260 million gallons per day. The existing temporary storage is supplied by a weir 50 feet high, with a maximum daily off-take of 40 million gallons. At 30th June, 1946, there were 93 service reservoirs with a combined capacity of 537.6 million gallons, and the length of mains was 4,656.8 miles.

(*b*) *Newcastle.* The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. About 30 square miles of water-bearing sand at present being tapped are expected to give a continuous yield of 15 million gallons a day. Service reservoirs distributed throughout the Water Supply District number 42, with a total storage capacity of 106 million gallons. The total length of mains at 30th June, 1946, was 1,098 miles.

(*c*) *Water Supplied, etc.* The following table gives the number of improved properties, the estimated population supplied, and other details for the years 1944–45 and 1945–46 :—

WATER SUPPLY, SYDNEY(*a*) AND NEWCASTLE : SERVICES.

System.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Average Daily Supply.	
					Per Property.	Per Head of Estimated Population.
	No.		Million Gallons.	Million Gallons.	Gallons.	Gallons.
Sydney (*a*)—						
1944–45 ..	374,660	1,596,647	112.6	41,107	301	71.2
1945–46 ..	378,277	1,628,269	121.7	44,437	322	74.8
Newcastle—						
1944–45 ..	54,015	214,184	17.6	6,413	325	81.4
1945–46 ..	55,171	217,956	17.6	6,413	319	80.1

(*a*) Includes part of South Coast.

(iii) *Sewerage and Drainage—to 30th June*, 1946. (*a*) *Metropolitan.* The Sydney sewerage system consists mainly of three outfall systems discharging into the Pacific Ocean. At 30th June, 1946, there were six individual outfalls and six treatment works connected with 2,780 miles of sewers, and serving a population of 1,178,064 persons.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 99 miles long.

(*b*) *Newcastle.* The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed. There were 37 miles of stormwater drains at 30th June, 1946.

(c) *Particulars of Services.* The following table supplies details of sewerage services and stormwater drains as at 30th June, 1945 and 1946.

SEWERAGE AND DRAINAGE, SYDNEY(*a*) AND NEWCASTLE : SERVICES.

System—at 30th June.	Improved Properties for which Sewer Available.	Population Served.	Length of Sewers.	Length of Storm-water Drains.
	No.		Miles.	Miles.
Sydney(*a*)—				
1945	281,957	1,160,523	2,760	93
1946	283,364	1,178,064	2,780	99
Newcastle—				
1945	(*b*) 37,614	(*c*) 144,500	575	37
1946	(*b*) 38,632	(*c*) 144,500	580	37

(*a*) Includes part of South Coast. (*b*) Premises connected. (*c*) At 30th June, 1944.

(iv) *Finances.* The following statement shows the debt, revenue and expenditure on account of the services of water supply, sewerage and drainage during 1944–45 and 1945–46.

WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY(*a*) AND NEWCASTLE : FINANCES.

Item.	Capital Debt.	Revenue.	Expenditure.				Surplus or Deficit.
			Working Expenses. (*b*)	Interest and Exchange.	Sinking Fund.	Total Expenditure.	
1944–45.							
Sydney (*a*)—	£	£	£	£	£	£	£
Water	28,307,128	2,276,923	932,837	1,120,967	210,304	2,264,108	+ 12,815
Sewerage ..	17,165,633	1,379,075	556,470	711,856	119,984	1,388,310	− 9,235
Drainage ..	860,903	75,300	28,132	38,248	5,152	71,532	+ 3,768
Total ..	46,333,664	3,731,298	1,517,439	1,871,071	335,440	3,723,950	+ 7,348
Newcastle—							
Water	4,235,703	311,202	157,765	159,481	25,443	342,689	− 31,487
Sewerage ..	2,251,003	190,088	97,676	89,606	12,795	200,077	− 9,989
Drainage ..	121,278	19,195	9,556	5,811	801	16,168	+ 3,027
Total ..	6,607,984	520,485	264,997	254,898	39,039	558,934	− 38,449
1945–46.							
Sydney (*a*)—	£	£	£	£	£	£	£
Water	28,767,586	2,376,692	1,020,510	1,135,190	215,566	2,371,266	+ 5,426
Sewerage ..	17,456,989	1,398,300	560,952	713,385	122,298	1,396,635	+ 1,665
Drainage ..	899,805	77,175	29,646	38,681	5,170	73,497	+ 3,678
Total ..	47,124,380	3,852,167	1,611,108	1,887,256	343,034	3,841,398	+ 10,769
Newcastle—							
Water	4,363,202	313,459	127,940	166,564	26,567	321,071	− 7,612
Sewerage ..	2,302,257	189,739	79,422	90,636	13,189	183,247	+ 6,492
Drainage ..	129,258	19,375	4,693	6,092	869	11,654	+ 7,721
Total ..	6,794,717	522,573	212,055	263,292	40,625	515,972	+ 6,601

(*a*) Includes part of South Coast. (*b*) Includes provision for renewals, long service leave, loss on exchange, etc.

(v) *Country Water Supply and Sewerage Systems**. The capital indebtedness of the country water and sewerage schemes controlled by municipalities, shires and county councils was £6,923,754 at 31st December, 1944, namely, £4,265,076 for water and £2,658,678 for sewerage. Of the foregoing amounts, Government advances amounted to £631,680. Debt of the municipalities amounted to £5,352,826, shires to £1,032,902 and county councils to £538,026. At 31st December, 1944, country water supply services were in operation or under construction in 76 municipalities, 44 shires and four county councils and country sewerage services in 53 municipalities and 11 shires.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers ; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,102,084 at 31st December, 1946.

There are also the Mulwala Water Supply and Sewerage System, constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

A water supply system at Broken Hill was transferred from the control of the then Department of Works and Local Government (now the Department of Public Works) to a special Board on 1st January, 1939. Capital debt owing to the State was written off and the Board commenced to raise loans on its own behalf to finance the construction of water amplification works and sewerage services. The debenture debt was £334,625 at 31st December, 1946.

2. **Victoria.**—(i) *Melbourne and Metropolitan Board of Works.* (*a*) *General.* All land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth-streets, Melbourne, and the remaining portions of the Cities of Mordialloc, Moorabbin and Nunawading and certain portions of the Shires of Eltham, Doncaster, and Templestowe, and Dandenong (all of which portions are outside such radius), but excluding a portion of the Shire of Werribee within such radius, are included in the metropolis for water supply, sewerage, main drainage and river improvement purposes. This territory has an area of 443 square miles and comprises 27 cities and parts of one other city and 10 shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system ; to provide the metropolis with an efficient system of main and general sewerage ; to deal with main drains and main drainage works ; and to control and manage the rivers, creeks and watercourses within the metropolis.

A summary of the combined financial results of the operations of the Board is shown below in respect of the years 1944–45 and 1945–46 :—

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES.

Year.	Capital Debt.	Revenue.	Expenditure.					
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Depreciation, Renewals, Reserves and Other Funds.	Other.	Total.
	£	£	£	£	£	£	£	£
1944–45	25,971,165	2,407,094	570,392	1,271,585	64,928	438,169	43,965	2,389,039
1945–46	25,971,165	2,309,505	718,087	1,263,123	64,928	259,555	33,071	2,338,764

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* Excludes the area of operation of the Hunter District Water Board (Newcastle).

In the following tables showing particulars of the finances of each of the various services, exchange, sinking fund, depreciation, renewal, etc., charges against General Revenue Account amounting to £593,475 in 1944–45 and to £404,350 in 1945–46 have not been included.

(*b*) *Water Supply.* The following table gives particulars of water supply services for 1944–45 and 1945–46. The rate levied in 1945–46 was 6d. in the £1 on the net annual value of the property served.

WATER SUPPLY, MELBOURNE: SERVICES.

Year.	Number of Properties Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Water Consumption for the Year.	Average Daily Consumption.		Length of Mains, Reticulation, etc.
					Per Property.	Per Head of Estimated Population.	
			Million Gallons.	Million Gallons.	Gallons.	Gallons.	Miles.
1944–45 ..	305,730	1,213,748	96.2	35,107	315	79.2	3,492
1945–46 ..	308,731	1,225,662	78.4	28,611	254	64.0	3,539

The financial operations of the Melbourne water supply system for the years 1944–45 and 1945–46 are shown below. The total capital cost to 30th June, 1945, was £13,179,202 and to 30th June, 1946, £13,347,341.

WATER SUPPLY, MELBOURNE: FINANCES.

Year.	Increase in Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1944–45 ..	77,335	1,133,575	259,974	22.93	549,621	323,980
1945–46 ..	168,139	1,033,524	359,930	34.83	545,452	128,142

(*c*) *Sewerage.* Particulars of sewerage services for 1944–45 and 1945–46 are given below. The rate levied in 1945–46 was 1s. in the £1 on the net annual value of the property served.

SEWERAGE, MELBOURNE: SERVICES.

Year.	Number of Buildings for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.
					Per Building.	Per Head of Estimated Population.	
			Million Gallons.	Million Gallons.	Gallons.	Gallons.	Miles.
1944–45 ..	288,921	1,147,016	54.9	20,047	190.1	47.9	2,721
1945–46 ..	291,536	1,157,398	56.4	20,582	193.5	48.7	2,749

The financial operations of the Melbourne sewerage system for the years 1944–45 and 1945–46, including those of the Metropolitan Sewage Farm, are given below. The total capital cost to 30th June, 1945, was £14,822,548 and £15,034,000 to 30th June, 1946.

SEWERAGE, MELBOURNE : FINANCES.

Year.	Increase in Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1944–45 ..	68,111	1,173,711	288,882	24.61	618,002	266,827
1945–46 ..	211,452	1,173,265	332,783	28.36	612,749	227,733

The total area of the Metropolitan Sewage Farm at 30th June, 1946 was 24,579 acres. The following table gives financial details of its operations for the years 1944–45 and 1945–46. The total capital cost to 30th June, 1945, was £1,372,337 and to 30th June, 1946, £1,421,947.

METROPOLITAN SEWAGE FARM : FINANCES.

(Included in Sewerage Finances.)

Year.	Increase in Capital Cost.	Revenue.	Cost of Sewage Disposal.	Other Working Expenses.	Interest.	Net Cost of Sewage Purification.
	£	£	£	£	£	£
1944–45 ..	33,231	66,383	60,047	28,451	56,415	78,530
1945–46 ..	49,610	45,311	69,618	36,039	56,571	116,917

(*d*) *Drainage and Rivers.* At 30th June, 1946 the Melbourne and Metropolitan Board of Works had 115 miles of main drains under its control—98 miles of underground, 12 miles of constructed open drains, and 5 miles of natural watercourses and unlined open drains. The following table gives details of the financial operations of the Melbourne drainage and river control system for the years 1944–45 and 1945–46. The total capital cost to 30th June, 1945, was £1,784,054 and to 30th June, 1946 £1,837,847.

DRAINAGE AND RIVERS, MELBOURNE : FINANCES.

Year.	Increase in Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1944–45 ..	47,631	99,808	21,536	21.57	57,549	20,723
1945–46 ..	53,793	102,716	25,374	24.70	58,126	19,216

(ii) *Geelong Waterworks and Sewerage Trust.* (*a*) *General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910, consists of five commissioners. The amount of loan money which may be raised is limited to £900,000 for water supply undertaking, £760,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 51,500. This and other general information relates to 30th June, 1946.

(*b*) *Water Supply.* The catchment area is about 16,000 acres. The storage capacity of all reservoirs and service basins is 2,738 million gallons. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. There are 320 miles of mains within the water supply area. The total expenditure on waterworks to 30th June, 1946 was £789,789. Expenditure for 1945–46 comprised £27,404 (£29,217 in 1944–45) on working expenses and £45,042 (£44,355 in 1944–45) on interest, sinking fund and reserves, and the revenue for the year 1945–46 was £57,667 (£66,255 in 1944–45). The sinking fund appropriations at June, 1946 amounted to £100,336. The replacement and contingencies reserve amounted to £121,275. There is a water rate of 1s. in the £1 (with minima of five shillings for unbuilt-on land and one pound for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 147 miles of main and reticulation sewers. The sewerage area is 9,571 acres, and the number of buildings within the sewered areas is 12,552, of which 12,532 have been connected. The number of buildings within the drainage area is 12,802. The total expenditure to 30th June, 1946 on sewerage works was £653,921, and on the cost of sewerage installation under deferred payment conditions £257,897 of which £163 is outstanding. The revenue in 1945–46 amounted to £45,193 (£44,788 in 1944–45) and the expenditure comprised £9,427 (£10,511 in 1944–45) on working expenses and £34,871 (£35,013 in 1944–45) on interest, sinking fund and reserves. Sinking fund appropriations at June, 1946 were £91,609. Replacement and contingencies reserve amounted to £90,410. A general rate of 1s. 2d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (*a*) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number seven, three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat. General information is as at 31st December, 1946.

(*b*) *Water Supply.* The Water Supply District embraces an area of about 27 square miles, containing a population of about 45,000. The total storage capacity of the six reservoirs is 2,332 million gallons and the catchment area is 17,545 acres.

The capital cost of construction of the waterworks was £767,333 to 31st December, 1946. The liabilities are loans due to the Government, amounting to £270,444 at 31st December, 1946. The revenue for the year 1946 was £42,851 (£47,156 in 1945). Working expenses during 1946 amounted to £23,971 (£17,966 in 1945) and interest and other charges to £22,120 (£24,580 in 1945). A rate is levied of 1s. in the £1 on the net annual value of all ratable properties, with a minimum of 15s. per annum for land on which there is a building or water supply.

(*c*) *Sewerage.* The scheme as designed provides for a population of 90,000 persons, but at 30th June, 1946 about 39,700 persons were being served. The capital cost of sewerage construction works to 31st December, 1946, was £467,402. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and one sewered areas had been declared as at 1st January, 1946, comprising 9,853 tenements, of which 8,913 were connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1946 amounted to £393,035, redemption payments at that date totalling £58,485. An expenditure of £187,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1946 (1945 in brackets) amounted to £36,375 (£34,869) and expenditure, including £23,947 (£24,080) on interest and redemption, to £33,858 (£33,264).

A general rate is levied of 1s. 6d. in the £1 of the net annual value of all properties within the drainage area.

(iv) *Sewerage Authorities.* At 30th June, 1946, 40 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts and the systems were in operation in the following districts :—Ararat, Bairnsdale, Ballarat (*see* above), Benalla, Bendigo, Castlemaine, Colac, Dandenong, Dimboola, Echuca, Hamilton, Horsham, Kerang, Kyabram, Kyneton, Mildura, Mornington, Morwell, Murtoa, Nhill, Portland, Shepparton, Swan Hill, Wangaratta, Warracknabeal, Warragul and Warrnambool. At Beechworth, Euroa, Lorne, Sale, Werribee, Wodonga and Yarram, operations had been suspended and the undertakings at Charlton, Leongatha, Maffra, Maryborough, Traralgon and Yarrawonga had not been brought into operation. After Ballarat (*see* details above), Bendigo is the largest system, serving approximately 26,175 persons, with 6,565 properties connected to sewers.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1946 included 35 large reservoirs and 225 subsidiary reservoirs and service basins with a total storage capacity of 536,000 million gallons (1,969,970 acre feet). Length of channels was 14,842 miles and of pipe lines 1,112 miles. The quantity of water delivered to water users during 1945–46 was 557,625 acre feet. The table below gives a summary of the Commission's finances for operations in districts under its control for the years 1944–45 and 1945–46 :—

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA: FINANCES.(*a*)

Year.	Receipts.	Payments.					Total Loan Capital Expenditure to 30th June.
		Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Redemption.	Total.	
	£	£	£	£	£	£	£
1944–45 ..	788,689	895,344	132,496	48,736	3,807	1,080,383	25,782,791
1945–46 ..	773,423	1,110,170	41,864	48,420	1,767	1,202,221	26,417,497

(*a*) Excludes Waterworks Trusts and Local Governing Bodies.

The financial operations of the State Rivers and Water Supply Commission form part of Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1945–46 was £1,511,616.

The Commission administered 80 rural districts during 1945–46 (28 irrigation districts, 34 waterworks districts, 4 flood protection districts and 14 drainage districts), and the reticulated pipe supplies for domestic and industrial purposes in 126 urban districts. In addition, 116 urban districts were administered by waterworks trusts and 16 by local governing bodies. The total loan capital expenditure of these trusts and local government bodies at 30th June, 1946 was £3,995,967, making a grand total of £30,413,464 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,502,190, was £28,911,274.

3. **Queensland.**—(i) *The Metropolitan Works Board, Department of Works, Brisbane City Council.* (*a*) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane, extending them, in the case of water supply, to the Cities of Ipswich and Redcliffe. Prior to 1928 water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council.

(*b*) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in brackets); Somerset Reservoir, 20,000 million gallons (20,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 2,500,000 gallons (2,500,000 gallons); Enoggera Reservoir, 1,000 million gallons

(631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are ten service reservoirs with a capacity of approximately 35.1 million gallons. The Somerset reservoir is under the control of the Stanley River Works Board and is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. The following table gives a summary of operations for the years 1944–45 and 1945–46 :—

WATER SUPPLY, BRISBANE : SERVICES.

Year.	Length of Trunk and Reticulation Mains.	Number of Services Connected.	Estimated Population Supplied.	Quantity Supplied.	Average Daily Supply.	Average Daily Supply per Head of Estimated Population.	Total Length of Trunk Mains.
	Miles.			Million Gallons.	Million Gallons.	Gallons.	Miles.
1944–45 ..	1,264	82,549	338,451	7,382	20.2	59.8	183
1945–46 ..	1,276	84,851	347,889	7,549	20.7	59.5	183

Water supplied to Ipswich and Redcliffe is not included in the table above. Adding this in, the total quantity supplied during 1944–45 was 8,007 million gallons and during 1945–46, 8,206 million gallons.

(c) *Sewerage.* The following table gives a summary of operations for the years 1944–45 and 1945–46 :—

SEWERAGE WORKS, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Length of Sewers in operation.	Sewers within Premises.	Main and Reticulation Sewers.
			Miles.	Miles.	Miles.
1944–45..	40,830	167,403	1,209	676	533
1945–46..	41,381	169,662	1,219	684	536

(d) *Water Supply and Sewerage Works' Finances.* The following table gives particulars regarding finances for the years 1944–45 and 1945–46 :—

WATER SUPPLY AND SEWERAGE WORKS, BRISBANE : FINANCES.

Service and Year.	Capital Cost.	Revenue.	Working Expenses.	Interest, Redemption, etc. Charges.	Total Expenditure.	Surplus or Deficit.
	£	£	£	£	£	£
Water Supply—						
1944–45.. ..	6,425,791	763,510	179,980	300,541	543,339	+ 220,171
1945–46.. ..	6,637,459	754,521	210,718	301,609	550,605	+ 203,916
Sewerage—						
1944–45.. ..	6,472,030	240,559	56,771	336,310	416,129	— 175,570
1945–46.. ..	6,540,181	234,731	57,135	335,308	410,801	— 176,070

(ii) *Country Towns.* (*a*) *Water Supply.* In addition to the city of Brisbane, there were at 30th June, 1945, 85 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(*b*) *Sewerage Systems.* At 30th June, 1945, there were ten cities or towns outside the metropolitan area—Bundaberg, Cunnamulla, Goondiwindi, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. Sewerage systems were in course of construction in Charleville and Ipswich.

(*c*) *Finances.* The receipts (other than loan) of water and sewerage undertakings controlled by the cities and towns referred to above (excluding one joint authority classed as semi-governmental) amounted to £491,803 in 1944–45. Expenditure amounted to £486,891, including £185,226 for debt charges. In addition, loan expenditure amounted to £132,493.

4. **South Australia.**—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks.* (*a*) *Summary.* The table hereunder gives particulars of the area, capacity, etc. of combined metropolitan and country water works for the years 1944–45 and 1945–46 :—

WATERWORKS, SOUTH AUSTRALIA : SERVICES.

Year.	Assessments.(*a*)		Area Supplied. (*a*)	Capacity of Reservoirs.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
		£	Acres.	Million Gallons.	Miles.	
1944–45 ..	193,109	6,980,468	11,873,499	23,904	6,781	105,329
1945–46 ..	196,021	7,035,516	11,901,977	23,910	6,845	103,462

(*a*) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(*b*) *Finances.* Figures for 1944–45 and 1945–46 are shown in the following table.

WATERWORKS, SOUTH AUSTRALIA : FINANCES.

Year.	Capital Cost.	Revenue.	Working Expenses.			Interest and Sinking Fund Charges.	Profit or Loss.
			Administration.	Maintenance.	Total.		
	£	£	£	£	£	£	£
1944–45 ..	18,261,861	882,505	69,503	267,536	470,280	701,878	−289,653
1945–46 ..	18,712,037	853,406	81,936	305,434	520,078	685,615	−352,287

(iii) *Adelaide Waterworks.* At 30th June, 1946 the Adelaide waterworks supplied a district of 138,784 acres. The capacity of its reservoirs was 14,449 million gallons.

Particulars of finances for the years 1944–45 and 1945–46 are given below :—

ADELAIDE WATERWORKS : FINANCES.

Year.	Capital Cost.	Revenue.	Working Expenses.			Interest and Sinking Fund Charges.	Profit or Loss.
			Administration.	Maintenance.	Total.		
	£	£	£	£	£	£	£
1944–45 ..	5,092,958	537,017	31,880	92,592	149,292	200,920	+ 186,805
1945–46 ..	5,335,798	517,555	38,068	122,512	185,603	196,576	+ 135,376

(iv) *Adelaide Metropolitan Sewerage.* Particulars for 1944–45 and 1945–46 are given hereunder :—

ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.

Year.	Length of Sewers.	Number of Connexions.	Capital Cost of Revenue-Producing Works.	Revenue.	Working Expenses.		Interest and Sinking Fund Charges.	Profit or Loss.
					Administration, Maintenance, etc.	Total.		
	Miles.		£	£	£	£	£	£
1944–45 ..	968	89,672	3,782,183	300,150	103,928	114,445	150,608	+ 35,097
1945–46 ..	985	91,201	3,874,065	300,207	111,381	121,554	148,283	+ 30,370

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1946 served an area of 11,763,193 acres, and the capacity of the reservoirs was 9,417 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

The following table gives financial information for 1944–45 and 1945–46 :—

COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(*a*)

Year.	Capital Cost.	Revenue.	Working Expenses.	Interest and Sinking Fund Charges.	Profit or Loss.
	£	£	£	£	£
1944–45	10,654,856	262,917	304,297	421,419	— 462,799
1945–46	10,833,353	247,733	304,848	406,127	— 463,242

(*a*) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the cost to 30th June, 1946, being £2,542,886. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in section (ii) above. The water is sold by measure ; hence particulars of assessments and area supplied do not apply. Revenue for the year 1944–45 was £113,851, working expenses, etc. £47,969, interest and sinking fund charges, £79,540 and net loss £13,658. Corresponding figures for 1945–46 were, respectively, £115,799, £57,307, £82,913 and £24,421.

5. **Western Australia.**—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(*a*) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District ; (*b*) Goldfields Water Supply ; (*c*) Water Supply of other towns, etc. ; (*d*) Agricultural Water Supply ; and (*e*) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (*a*) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest water supply project, the Canning Dam, with a capacity of 20,550 million gallons, was completed during 1940.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. At 30th June, 1945, the number of premises connected with sewers was 42,969, and the length of sewers was 527 miles. Corresponding figures for 1946 were, respectively, 43,509 and 529. The estimated population served at 30th June, 1945 was 193,960, and at 30th June, 1946, 208,296.

There are 33 miles of stormwater drains in the metropolitan area.

(*b*) *Summary.* The following table gives particulars of water supply for 1944–45 and 1945–46 :—

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.

Year.	Estimated Population Supplied.	Number of Services.	Annual Consumption of Water.	Average Daily Consumption. Per Head.	Average Daily Consumption. Per Service.	Number of Meters.	Length of Mains.
			Million Gallons.	Gallons.	Gallons.		Miles.
1944–45 ..	243,610	66,863	7,662	86.2	314.0	41,632	1,029
1945–46 ..	247,090	68,310	8,041	89.2	322.6	41,923	1,054

(*c*) *Finances.* The table hereunder gives separate information for the water supply, and sewerage and drainage branches for 1944–45 and 1945–46 :—

METROPOLITAN WATER SUPPLY, AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.

Year.	Water Supply. Capital Cost.	Water Supply. Revenue.	Water Supply. Expenditure.(*a*)	Sewerage and Drainage. Capital Cost.	Sewerage and Drainage. Revenue.	Sewerage and Drainage. Expenditure.(*a*)
	£	£	£	£	£	£
1944–45 ..	5,288,815	375,331	330,853	3,848,205	216,128	238,476
1945–46 ..	5,355,908	360,904	343,807	3,885,585	214,605	246,030

(*a*) Includes interest and sinking fund.

(iii) *Goldfields Water Supply.* The source of supply for the Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. This scheme is now linked by pipeline with the Canning Dam. In 1944–45 the railways consumed 6.8 per cent., the mines 24.8 per cent., and domestic, etc., 68.4 per cent. of the supply. The following table gives details for 1944–45 and 1945–46 :—

GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA : SUMMARY.

Year.	Total Consumption.	Number of Services.	Length of Water Mains.	Capital Cost.	Revenue.	Expenditure.(a)
	Million Gallons.		Miles.	£	£	£
1944–45 ..	1,764	14,196	1,745	6,127,843	314,422	392,338
1945–46 ..	1,831	(b) 14,196	1,750	6,178,682	317,913	405,615

(a) Includes interest and sinking fund. (b) At 30th June, 1945.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1944–45 water supplied to other towns and districts, excluding minor water supplies, amounted to 442 million gallons, including service to adjacent mines (3,045,500 gallons) and railways (50,934,500 gallons). Estimated population served numbered 31,874.

(b) *Controlled by Government Railways.* Consumption for the year ended 30th June, 1945, was 358 million gallons. In addition, 376 million gallons were obtained from other sources, mainly the Goldfields Water Scheme and the Metropolitan Water Supply. This amount is apportioned between the consumption totals of the two systems as shown above.

(c) *Water Boards not Controlled by Government.* During 1944–45 approximately 442 million gallons of water were supplied to an estimated population of 18,983.

(v) *Agricultural Water Supply.* During the thirty-five years from 1st July, 1910 to 30th June, 1945, 551 tanks were built, 385 wells sunk, and 3,669 bores put down to a total depth of 200,607 feet. Of the bores put down, 555 yielded fresh and 327 stock water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1945, the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (exclusive of operations by Defence Services) was 284, ranging in depth from 30 to 4,006 feet. These figures include 52 bores sunk in the metropolitan area.

6. **Tasmania.**—(i) *Waterworks.* At the end of 1945–46 (1944–45 in brackets) there were 36 (36) municipal waterworks in Tasmania. The capacity of the reservoirs was 876 (889) million gallons, the estimated population served was 155,955 (157,143), the number of properties assessed was 49,771 (49,539), and the length of aqueducts, mains and reticulation was 1,030 (1,010) miles. Costs of construction amounted to £1,820,444 (£1,802,220). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1945–46 of 578,440 gallons, and 150 miles of reticulation and 91 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

§ 5. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938–39 and 1942–43 to 1945–46 are shown in Chapter V.—Transport and Communication, § 3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1945–46 are given in § 6 of the same chapter.

1. **New South Wales.**—(i) *Maritime Services Board of New South Wales.* (*a*) *General.* The port of Sydney is administered by the Maritime Services Board of New South Wales, a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935, in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-State shipping, including the survey and certification of vessels and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney, the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(*b*) *Port of Sydney.* The entrance to Sydney Harbour is nearly a mile wide, and is not less than 80 feet deep. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each with a depth of 40 feet at low tide and a width of 700 feet. The foreshores, which have been reduced by reclamations, are 152 miles in length, and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

Excluding ferry wharves and jetties used for private purposes, there are 64,676 feet of wharfage controlled by the Maritime Services Board and 9,928 feet of commercial wharfage privately owned. Ferry berths cover 3,427 feet, and the total for all purposes is 78,031 feet. The principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port: the remainder are reserved for vessels which visit the port occasionally. There is ample shed accommodation for normal demands and the port is well equipped with railway wharfage for the handling of traffic which is required to pass direct from ship to rail and vice versa. For the wheat export trade, in both bulk and bag, ample wharfage accommodation and handling equipment of the most modern character are available. Special facilities for the storage and handling of other staple products such as wool, etc., are provided on the waterside, and modern plant has been installed for replenishing ships' bunkers with oil or coal. Facilities in all directions can be very considerably extended when required.

The docking facilities comprise five large graving docks, three floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table gives particulars of the finances of the Board for 1944–45 and 1945–46 in respect of the Port of Sydney :—

MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

Year.	Revenue.			Expenditure.			Surplus.	Total Capital Debt.
	Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange. etc.	Total.		
	£	£	£	£	£	£	£	£
1944–45 . .	843,449	167,025	1,445,975	472,392	558,563	1,030,955	415,020	11,050,206
1945–46 . .	799,734	170,766	1,420,187	640,703	550,957	1,191,660	228,527	11,048,854

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an advisory committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and third in Australia. It is primarily a coal-loading port, but its activities cover the shipment of general commodities. The wharfage and other facilities of the port have been further improved and extended to meet the actual and the anticipated growth of trade with the expansion of industry in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

Wharfage accommodation amounts to almost 20,000 feet. Depths of water range from 25 to 28 feet (low water ordinary spring tide).

(d) *Port Kembla.* The Navigation and Harbour and Tonnage Rates Acts are administered at Port Kembla by the New South Wales Department of Public Works on behalf of the Maritime Services Board. Port Kembla, which is sharing to an increasing extent in the shipping trade of the State, has an area of approximately 330 acres, with depths ranging from 18 to 50 feet (low water ordinary spring tide) and wharfage accommodation has been provided for large ocean-going vessels. Being adjacent to the southern coalfields and a rapidly developing centre of secondary industries, its trade is growing and a great future for the port is predicted.

(e) *Other Ports.* In addition to the ports of Sydney and Newcastle, the Board controls more than 20 outports along the coastline of 609 miles.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. The gross collections by the State authorities amounted to more than £1,743,000 in each of the years 1944–45 and 1945–46. Commonwealth Government revenue from marine sources for the whole of Australia amounted to £261,068 in 1944–45 and £250,991 in 1945–46.

2. **Victoria.**—(i) *Melbourne Harbour Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1946, the sheds available for wharfage accommodation had a length of 19,567 feet, covering an area of 1,338,578 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,321 acres and the total length of wharves, piers and jetties in the port is 61,740 feet, giving an area of over 58 acres of wharfage, of which 52,799 feet is effective berthing space. The depths of water (low water ordinary spring tide) of main channels and at principal wharves are about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1945 and 1946 :—

MELBOURNE HARBOUR TRUST : FINANCES.

Year.	Revenue.		Expenditure.				Surplus.	Gross Loan Indebtedness.
	Wharfage and Tonnage Rates.	Total. (a)	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a) (b)		
	£	£	£	£	£	£	£	£
1945 ..	662,990	917,565	358,991	244,905	130,062	885,556	32,009	4,008,151
1946 ..	701,591	961,037	424,601	244,890	129,200	958,009	3,028	3,973,100

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust: 1945, £151,598; 1946, £159,318. (b) Excludes capital expenditure: 1945, £184,264; 1946, £403,400.

(ii) *Geelong Harbour Trust.* The Geelong Harbour Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbour Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. Revenue for the years 1945 and 1946 was £98,625 and £105,637 respectively. Revenue expenditure was £79,184 and £81,273, capital expenditure £13,651 and £27,507, and loans outstanding at the end of each year amounted to £533,193 and £529,087. Depths of water available in Geelong Harbour range from 24 to 29 feet (low water ordinary spring tide).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. **Queensland.**—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 33 feet in the North-West channel to 18 feet in the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 24 and 30 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1944–45 and 1945–46 are shown below :—

BRISBANE HARBOUR : FINANCES.

Year.	Revenue.		Expenditure.		Credit Balance.	Loan Indebtedness.
	Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).		
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1944–45 ..	164	198	97	176	132	1,099
1945–46 ..	146	247(*a*)	127	206	173	1,086

(*a*) Includes accumulated hire charges, etc., for dredging work done for the Commonwealth Government.

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by Harbour Boards.

(iii) *Harbour Boards.* Harbour Boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1946 are shown below, and a summary for the year 1945 as well as for 1946.

HARBOUR BOARDS, QUEENSLAND : FINANCES, 1946.

Harbour Board.	Revenue.		Expenditure (excluding Loan).		Surplus or Deficit.	Loan Indebtedness.
	Wharfage and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).		
	£	£	£	£	£	£
Bowen	10,475	12,390	5,654	13,058	−668	268,366
Bundaberg	4,048	5,078	2,649	6,194	−1,116	13,293
Cairns	60,642	83,296	78,593	90,775	−7,479	163,317
Gladstone	8,179	11,269	3,571	18,673	−7,404	91,680
Mackay	66,575	72,176	11,298	52,481	+19,695	376,078
Rockhampton ..	15,328	33,426	25,224	39,279	−5,853	504,534
Townsville	62,684	107,215	48,959	99,618	+7,597	72,013
Total, 1946 ..	227,931	324,850	175,948	320,078	+4,772	1,489,281
Total, 1945 ..	382,751	474,104	173,203	298,872	+175,232	1,442,740

4. **South Australia.**—*The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three commissioners, appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions, and controls about 60 ports, but at many of them there is little or no shipping movement. The more important are Adelaide, Augusta, Lincoln, Pirie, Wallaroo and Whyalla. Maximum depths of water (low water ordinary spring tide) at the wharves of these ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1944–45 and 1945–46.

SOUTH AUSTRALIAN HARBOURS BOARD : FINANCES.

Year.	Revenue.	Expenditure from Revenue.				Surplus or Deficit.	Capital Expenditure to 30th June.
		Working Expenses.	Interest.	Sinking Fund.	Total.		
	£	£	£	£	£	£	£
1944–45 ..	638,516	268,961	316,862	50,459	636,282	+ 2,234	8,192,447
1945–46 ..	600,658	292,010	301,583	52,696	646,289	− 45,631	8,224,568

5. **Western Australia.**—(i) *Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 36 feet, and at the wharves 33 feet. The length of wharf berth accommodation is 10,177 feet.

Gross earnings for the year 1944–45 amounted to £780,078, working expenses to £451,149, interest, £142,582, sinking fund, £25,262, replacement fund, £2,000, and payment of surplus cash to Consolidated Revenue, £158,385. Corresponding figures for 1945–46 were : £709,810, £416,041, £141,911, £26,462, £2,000 and £123,837.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance to and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1944–45 were £33,944, working expenses £23,922 and interest £33,768 (1945–46, £24,420, £32,219, £33,779).

(iii) *Other Ports.* Of the remaining eleven ports of Western Australia, Albany, Carnarvon and Geraldton have the largest amount of shipping movement.

6. **Tasmania.** There are seven Marine Boards and two Harbour Trusts in Tasmania. The Marine Boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the Harbour Trusts those of Smithton and Leven. Aggregate receipts of all these authorities during the year 1944–45 were £201,404 and expenditures, £190,744, including loan charges, £46,125. Corresponding figures for 1945–46 were £214,327, £246,393 and £49,610. The total receipts of the Hobart Marine Board during 1944–45 were £43,182, loan charges £1,074 and total expenditure £45,597. Corresponding figures for 1945–46 were £55,394, £1,110 and £63,172. Launceston Marine Board receipts during 1944–45 amounted to £67,089, loan charges to £11,024 and total expenditure to £69,199. The figures for 1945–46 were, respectively, £60,751, £10,145 and £60,751.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic there is also considerable oversea shipping. Depths of water at wharves vary, in general, between 16 and 40 feet (low water ordinary spring tide), but at Hobart the Ocean Pier has a depth of water of from 36 to 60 feet.

§ 6. Fire Brigades.

1. **New South Wales.**—(i) *General.* Under the Fire Brigades Act 1909–44, a Board of Fire Commissioners, consisting of eight members, operates, and 137 fire districts had been constituted at the end of 1946. The cost of maintenance of fire brigades is borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not, except in special circumstances, exceed the amount obtainable from ¼d. in the £1 rate on the unimproved capital value of ratable land in the fire district.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1946, the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 216 officers and 823 permanent, 1,908 volunteer and 1,686 reserve firemen. Corresponding figures for the Sydney Fire District were 160, 772, 268 and 539. The revenue for the year 1946 (figures for the year 1945 in parenthesis) was £707,177 (£594,704), made up as follows :—From the Government, £172,178 (£140,931) ; municipalities and shires, £172,178 (£140,931) ; fire insurance companies and firms, £344,356 (£281,862) ; and from other sources, £18,465 (£31,070). The disbursements for the year were £700,859 (£653,608).

2. **Victoria.**—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944, the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten. The income of each Board is derived in equal proportions from the Treasury, the municipalities and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* On 30th June, 1946, the Board had under its control 42 stations, 350 permanent staff, 189 special service and clerical, etc. staff, and 147 partially-paid firemen. The total receipts for 1945–46 (1944–45 in parenthesis) were £298,204 (£309,525), comprising contributions £218,982 (£224,964), receipts for services £53,385 (£59,040), and interest and sundries £25,837 (£25,521). The expenditure was £305,081 (£299,096).

(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. At 30th June, 1946, there were 170 municipal councils and 118 insurance companies included in the operation of the Act, and 185 urban and 776 rural fire brigades.

The receipts for the first complete period of operation of the authority (2nd April, 1945 to 30th June, 1946) amounted to £117,791. Total expenditure other than loan amounted to £103,106.

3. **Queensland.**—(i) *General.* The Acts of 1920–31 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows :—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1946, there were fire brigades in 44 towns. The total revenue for the year 1945-46 (figures for 1944–45 in parenthesis) was £210,985 (£224,135), received mainly from the following sources : Government £54,119 (£58,964), local authorities £53,560 (£51,647), insurance companies £80,289 (£77,425), and loans (Government and other), £470 (£7,181). The total expenditure for the year was £210,363 (£220,872), the chief items being salaries and wages £145,528 (£150,847), and interest and redemption of loans, £21,915 (£21,804).

4. **South Australia.**.—The Fire Brigades Act 1936–44 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned. The contribution of the Treasury, however, is limited to £10,000 and if two-ninths of the expenses and maintenance exceeds this amount, five-sevenths of the excess is contributed by the insurance companies and two-sevenths by the municipalities. At the 30th June, 1946 there were altogether 32 fire brigade stations, and the total revenue for the years 1944–45 and 1945–46 was £86,561 and £85,096 respectively.

5. **Western Australia.**—(i) *General.* Under the 1942 Act certain Municipal and Road Board Districts are constituted fire districts under the control of the Western Australian Fire Brigades Board. The income of the Board is derived in the proportion of two-ninths from the Government, two-ninths from Local Government Authorities, and five-ninths from insurance companies.

(ii) *Western Australian Fire Brigades Board.* The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 43. The revenue for the year ended 30th September, 1945 was £78,589 and the expenditure £80,173. Corresponding figures for the year ended September, 1946 are : £85,410 and £93,682.

6. **Tasmania.**—(i) *General.* The municipal council of any municipality may, under the Act of 1920, petition the Government to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasury, the municipality concerned, and insurance companies insuring property within the district.

(ii) *Hobart Fire Brigade Board.* The revenue of the Board for the year 1945 amounted to £11,412, for the half-year ended 30th June, 1946 to £6,486, and for the year ended 30th June, 1947 to £13,278.

CHAPTER XIV.

PRIVATE FINANCE.

NOTE.—This chapter, for convenience, has been sub-divided into six sections as follows :—

Currency ; Banking, including Savings Banks ; Companies ; Insurance ; Friendly Societies ; and Probates.

A. CURRENCY.

§ 1. General.

The Australian monetary system is based on the British system of which the unit is the pound (£) divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909 the Australian sovereign was identical in weight and fineness with the English sovereign. As the currency was then based on a gold standard the Australian pound was equivalent to the sovereign (i.e. 123.27447 grains of gold $^{11}/_{12}$ths fine) and, until the depression in 1930, was generally regarded as identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound until 5th August, 1947, when the Australian Government advised the International Monetary Fund, in terms of the agreement, that the par value of the Australian pound was 2.86507 grammes of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, bank notes issued by the trading banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution the control of currency, coinage and legal tender and the issue of paper money were vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

§ 2. Coinage.

1. **Coins in Circulation.**—Until 1910 the coins used for currency in Australia were United Kingdom gold, silver and bronze coins. The gold coins in general circulation were sovereigns and half-sovereigns minted by the Royal Mint in England or by branches of the Royal Mint established in Sydney, Melbourne and Perth. Wherever minted, these gold coins were British currency and were identical in weight and fineness. British token coins in general circulation were the half-crown, florin, shilling, sixpence and threepence of silver and the penny and half-penny of bronze. The Coinage Act 1909 authorized the Treasurer to issue Australian coins of the following denominations, viz. :—

Silver—Florin, shilling, sixpence and threepence.
Bronze—Penny and half-penny.

Coins of these denominations having a distinctive Australian design were first issued under this Act in 1910. The United Kingdom silver and bronze coins in circulation when the Australian coins were introduced continued to be legal tender, but arrangements were made with the British Government to withdraw United Kingdom silver coins from circulation at the rate of £100,000 per annum. The withdrawal under these arrangements continued for some years and was greatly accelerated by the appreciation of sterling in terms of Australian currency in 1930 and 1931. At the present time practically the only coins circulating in Australia are those issued under the Coinage Act 1909–1947. In 1936 the Coinage Act 1909 was amended to permit the issue of an additional silver coin—the Crown (5s.). A further amendment in 1947 reduced the silver content of silver coins from 92.5 per cent. to 50 per cent. The first issues of the new coins were made in July, 1947.

From 1910 to 1916 Australian coins were minted in England by the Royal Mint, London. Since 1916 they have been minted at the Melbourne branch of the Royal Mint. Gold coins practically disappeared from circulation during the 1914–18 War and their place was taken by Australian notes. In September, 1931 the Australian Mints ceased to mint gold coins. During the 1939–45 War the Melbourne Mint was unable to meet the full demand for Australian coins and some coins were minted at the Perth Mint and at mints in the United States of America and India.

2. **Issues of Australian Coins.**—The total issues of silver and bronze coinage on account of the Commonwealth since 1910 are set out in the following table :—

AUSTRALIAN COINS : SILVER AND BRONZE ISSUES.

Year.	Silver.						Bronze.		
	Crown. 5s.	Florin. 2s.	Shilling. 1s.	Sixpence. 6d.	Three-pence. 3d.	Total.	Penny. 1d.	Half-penny. ½d.	Total.
	£	£	£	£	£	£	£	£	£
1910 to 1937	200,000	4,525,900	1,947,300	1,008,300	972,300	8,653,800	*a*427,013	154,635	581,648
1937–38 ..	50,000	365,000	93,600	59,700	65,200	633,500	26,770	7,130	33,900
1938–39 ..	25,000	77,400	30,000	47,800	39,400	219,600	30,660	11,140	41,800
1939–40 ..	600	176,800	36,800	41,600	50,600	306,400	20,770	5,280	26,050
1940–41 ..	..	1,161,000	83,400	66,800	83,200	1,394,400	45,820	7,600	53,420
1941–42 ..	..	1,505,800	69,000	53,000	64,400	1,692,200	57,230	20,270	77,500
1942–43 ..	..	3,090,600	781,000	724,200	439,400	5,035,200	126,380	25,100	151,480
1943–44 ..	..	2,615,000	650,000	200,000	759,400	4,224,400	206,210	77,800	284,010
1944–45 ..	..	1,343,000	978,800	352,400	150,000	2,824,200	96,340	1,500	97,840
1945–46 ..	..	1,473,400	..	..	..	1,473,400	30,170	25,310	55,480
1946–47 ..	..	..	..	..	..	..	7,470	22,710	30,180
Total ..	275,600	16,333,900	4,669,900	2,553,800	2,623,900	26,457,100	1,074,833	358,475	1,433,308

(*a*) Includes £4,100 issued to New Zealand.

3. **Standard Weight and Fineness of Coinage.**—The standard weight and fineness of the sovereign, half-sovereign and Australian silver and bronze coins are set out in the schedule to the Coinage Act 1909–1947. These details are given in the following table :—

IMPERIAL GOLD COINS AND AUSTRALIAN SILVER AND BRONZE COINS : STANDARD WEIGHT AND FINENESS.

Denomination of Coin.	Standard Weight.	Least Current Weight.	Standard Fineness.	Remedy Allowance.(*a*)		
				Weight per Piece.	Proportion of weight applicable to tests of 1,000 pieces in bulk.	Millesimal Fineness.
	Grains.	Grains.		Grains.		
Gold—						
Sovereign ..	123.27447	122.50000	Eleven-twelfths fine gold, one-twelfth alloy ; or millesimal fineness 916.$\dot{6}$	0.20	..	2
Half-sovereign	61.63723	61.12500		0.15	..	
Silver—						
Crown ..	436.36363	..	One-half fine silver, one-half alloy ; or millesimal fineness 500(*b*)	..	1 in 220	5
Florin ..	174.54545	..		..	1 in 175	
Shilling ..	87.27272	..		..	1 in 150	
Sixpence ..	43.63636	..		..	1 in 125	
Threepence ..	21.81818	..		..	1 in 100	
Bronze—						
Penny ..	145.83333	..	Mixed metal, copper, tin and zinc	..	1 in 40	none
Halfpenny ..	87.50000	..		..	1 in 40	

(*a*) Permissible variation from standard weight and fineness. (*b*) Coin issued prior to 8th July, 1947—thirty-seven fortieths fine silver, three fortieths alloy ; or millesimal fineness 925.

4. **Legal Tender.**—Imperial gold coins of the specified weight and fineness are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

5. **Profits on Coinage of Silver and Bronze.**—Australian silver and bronze coins are token coins and, as the face value of the coins is much greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1938–39 and 1943–44 to 1946–47.

AUSTRALIAN SILVER AND BRONZE COINS: PROFITS FROM ISSUE.

Year.	Coin Issued.	Cost of Bullion.	Gross Profit.	Cost of Minting and sundry charges.	Net Profit to Consolidated Revenue.
SILVER COIN.					
	£	£	£	£	£
1938–39 ..	219,600	81,314	138,286	18,459	119,827
1943–44 ..	4,224,400	2,025,091	2,199,309	199,309	2,000,000
1944–45 ..	2,824,200	1,301,228	1,522,972	224,617	1,298,355
1945–46 ..	1,473,400	776,810	696,590	100,906	595,684
1946–47(*a*) ..	..	..	..	165,051	– 165,051
BRONZE COIN.					
	£	£	£	£	£
1938–39 ..	41,800	7,838	33,962	26,025	7,937
1943–44 ..	284,010	75,478	208,532	180,646	27,886
1944–45 ..	97,840	23,362	74,478	65,796	8,682
1945–46 ..	55,480	14,393	41,087	32,172	8,915
1946–47 ..	30,180	7,714	22,466	27,332	– 4,866
TOTAL.					
	£	£	£	£	£
1938–39 ..	261,400	89,152	172,248	44,484	127,764
1943–44 ..	4,508,410	2,100,569	2,407,841	379,955	2,027,886
1944–45 ..	2,922,040	1,324,590	1,597,450	290,413	1,307,037
1945–46 ..	1,528,880	791,203	737,677	133,078	604,599
1946–47(*a*) ..	30,180	7,714	22,466	192,383	– 169,917

(*a*) During 1946–47 a considerable quantity of new silver coin was minted but not issued until 1947–48. The cost of minting this coin is included and consequently a loss resulted.

NOTE.—Minus sign (–) denotes loss.

6. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June 1872, and the Perth branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid into the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916 the Melbourne branch took over from the Royal Mint, London the minting of Australian silver and bronze coins, and during the 1939–45 War the Perth branch commenced minting Australian coins. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

(ii) *Gold Receipts and Issues.* (*a*) *Receipts.* The receipts of gold during 1945, 1946 and 1947 and the aggregate at each mint to the end of 1947 were as follows :—

AUSTRALIAN MINTS : RECEIPTS OF GOLD.

Mint.	Deposits during year—			Total to end of 1947.		
				Quantity.		Value.(*b*)
	1945.	1946.	1947.	Gross.	Fine.	
	Oz.	Oz.	Oz.	Oz.	Oz.	£
Sydney(*a*)	. .	. .	. .	42,082,928	36,907,045	156,771,141
Melbourne . .	128,727	175,184	265,625	46,996,090	42,042,971	178,587,076
Perth . .	653,737	817,721	1,032,388	50,237,664	39,967,709	169,771,926
Total	782,464	992,905	1,298,013	139,316,682	118,917,725	505,130,143

(*a*) To end of 1926, when the mint was closed. (*b*) At £3 17s. 10½d. per standard ounce.

(*b*) *Issues.* The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc), and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped in 10-oz. bars to India. Since early in the 1939–45 War all gold has been acquired by the Commonwealth Bank and the export and use of gold has been subject to regulation by the Commonwealth Government. The issues during the years 1945 to 1947, and the total to the end of 1947, are shown in the table below :—

AUSTRALIAN MINTS : ISSUES OF GOLD.

Mint.	Coin.			Bullion.(*a*)	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
1945—					
Melbourne . .	. .	. .	. .	421,151	421,151
Perth . .	. .	. .	. .	1,978,886	1,978,886
Total, 1945	. .	. .	. .	2,400,037	2,400,037
1946—					
Melbourne . .	. .	. .	. .	561,795	561,795
Perth . .	. .	. .	. .	2,524,539	2,524,539
Total, 1946	. .	. .	. .	3,086,334	3,086,334
1947—					
Melbourne . .	. .	. .	. .	644,667	644,667
Perth . .	. .	. .	. .	3,120,154	3,120,154
Total, 1947	. .	. .	. .	3,764,821	3,764,821
Aggregate—					
Sydney . .	144,435,550	4,781,000	149,216,550	7,574,408	156,790,958
Melbourne . .	147,283,131	946,780	148,229,911	30,332,172	178,562,083
Perth . .	106,384,197	367,338	106,751,535	63,048,115	169,799,650
Total to end of 1947 . .	398,102,878	6,095,118	404,197,996	100,954,695	505,152,691

(*a*) Value expressed at £3 17s. 10½d. per standard ounce.

7. **Price of Gold.**—In consequence of Great Britain's departure from the gold standard on 21st September, 1931, the London market value of gold immediately rose by about 17½ per cent. from £4 4s. 11d. to £4 19s. 7d. per fine ounce. Considerable fluctuations have since taken place, but during the years just prior to the 1939–45 War the price was steadily rising. At the outbreak of war the price in London was fixed at £stg.8 8s. 0d. per fine ounce, and in June, 1945, was raised to £8 12s. 3d. per fine ounce. In Australia the price of gold is fixed by the Commonwealth Bank.

The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1937–38 to 1946–47. The average price of gold in Australia is based on the Commonwealth Bank's buying price for gold lodged with the mints.

PRICE OF GOLD: LONDON AND AUSTRALIA.

Period.	London.		Australia.		
				Sovereign.	
	Average price per fine oz.	Average value of Sovereign.	Average price per fine oz.	Average value.	Equivalent to a premium of—
	£stg. *s.* *d.*	£stg. *s.* *d.*	£A. *s.* *d.*	£A. *s.* *d.*	%
1937–38 ..	7 0 0	1 13 0	8 13 10	2 0 11	104.6
1938–39 ..	7 6 9	1 14 7	9 2 9	2 3 0	115.0
1939–40 ..	8 4 10	1 18 8	10 8 4	2 9 1	145.4
1940–41 ..	8 8 0	1 19 7	10 13 5	2 9 2	145.8
1941–42 ..	8 8 0	1 19 7	10 11 4	2 8 7	142.9
1942–43 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0
1943–44 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0
1944–45 ..	8 8 3	1 19 7	10 11 10	2 8 9	143.8
1945–46 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0
1946–47 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0

§ 3. Notes.

1. **General.**—In 1901 notes in circulation in Australia consisted of bank notes payable in gold coin and issued by the trading banks, and Queensland Treasury notes. Bank notes circulated in all States except Queensland; but were not legal tender. There were, however, some restrictions on their issue or other provisions for the protection of the public. Queensland Treasury notes were issued by the Queensland Government and were legal tender in that State. These notes continued in circulation until 1910 when the Australian Notes Act 1910 and Bank Notes Tax Act 1910 were passed by the Commonwealth Parliament. The Australian Notes Act 1910 prohibited the circulation of State notes as money and the Bank Notes Tax Act 1910 imposed a tax of 10 per cent. per annum on "all bank notes issued or re-issued by any bank in the Commonwealth after the

commencement of this Act, and not redeemed ". These Acts put an end to the issue of notes by the trading banks and the Queensland Treasury. The Commonwealth Bank Act 1945 prohibited the issue of notes by any person (including a bank).

2. **The Australian Note Issue.**—(i) *General.* The Australian Notes Act 1910 empowered the Governor-General to authorize the Commonwealth Treasurer to issue Australian notes in denominations of 10s., £1, £5, £10 and any multiple of £10. These notes were to be legal tender and payable in gold coin on demand at the Commonwealth Treasury at the Seat of Government. The Act came into force by proclamation on 1st November, 1910 and notes were issued forthwith. The control of the Australian note issue remained with the Commonwealth Treasury until 1920 when it was transferred to the Note Issue Department of the Commonwealth Bank. This department was controlled by a separate Board of Directors until 1924 when it was brought under the authority of the newly created general Board of Directors of the Bank. This form of control continued until 1945 when the management of the Commonwealth Bank was reorganized and placed, together with the Note Issue Department, under a Governor assisted by an Advisory Council.

The Commonwealth Bank Act 1920 authorized the issue of a 5s. note. However, notes of this denomination have not been issued. As stated above, Australian notes originally issued were payable in gold coin on demand at the Commonwealth Treasury at the Seat of Government. When the control of the Australian Note Issue was transferred to the Note Issue Department of the Commonwealth Bank, it was provided that the notes should " bear the promise of the Treasurer to redeem the notes in gold coin . . . . . on demand at the Head Office of the Commonwealth Bank ". By the Commonwealth Bank Act 1932 this provision was abolished and since 1932 Australian notes have not contained any such promise and are merely stated to be legal tender in the Commonwealth and in all Territories under the control of the Commonwealth.

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000.

(ii) *Gold Reserve against the Note Issue.* The Australian Notes Act 1910 provided that the Treasurer should hold, in gold coin, a reserve of an amount not less than one-fourth of the notes issued up to £7,000,000 and an amount equal to the excess over £7,000,000. In 1911, this provision was amended and the Treasurer was required only to hold, in gold coin, an amount not less than one-fourth of the total amount of Australian notes issued. In June, 1931, to permit further shipments of gold to meet short term obligations in London, an amendment to the Commonwealth Bank Act provided for the reduction of the gold reserves for the two years ended 30th June, 1933, to not less than 15 per cent. The reserve was again to be increased, by graduated steps, to 25 per cent. by 30th June, 1935. In May, 1932, a further amendment to the Commonwealth Bank Act provided that the reserve might be held " in gold or in English sterling or partly in gold and partly in English sterling ". English sterling was defined as " currency which is legal tender in the United Kingdom, and included—(*a*) balances standing to the credit of the Bank at the Bank of England or at any other of its bankers in London ; (*b*) Bills of Exchange or advances secured by Bills of Exchange which—(i) are payable in the United Kingdom in currency which is legal tender in the United Kingdom , (ii) will mature in not more than three months, and the security for the payment of which Bills is, in the opinion of the Bank, satisfactory ; and (*c*) Treasury Bills or other securities of the United Kingdom which will mature in not more than three months ". The provisions for the holding of a reserve in gold or English sterling against the note issue were abolished by the Commonwealth Bank Act 1945.

(iii) *Australian Notes in Circulation.* Particulars of the average values of notes in circulation for the years 1938–39 and 1943–44 to 1946–47 are given in the following table :—

AUSTRALIAN NOTE ISSUE.

Denomination.	Average of monthly statements for year—				
	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.
10s.	4,141	7,332	8,177	8,187	7,912
£1	21,124	55,195	65,207	74,170	68,161
£5	11,718	60,437	71,745	77,327	78,814
£10	5,126	32,875	39,280	32,250	44,004
£20	111	53	43	11	9
£50	1,259	3,566	3,616	176	103
£100	2,238	4,813	4,761	273	183
£1,000	2,855	637	894	424	453
Held by Banks	15,454	15,573	16,669	17,077	18,895
Held by Public	33,118	149,335	177,054	175,741	180,744
Total	48,572	164,908	193,723	192,818	199,639

(iv) *Commonwealth Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1946 and 1947.

NOTE ISSUE DEPARTMENT.

Liabilities.	30th June—		Assets.	30th June—	
	1946.	1947.		1946.	1947.
	£'000.	£'000.		£'000.	£'000.
Notes on Issue(*a*) ..	198,930	202,643	Gold and English sterling ..	50,880	50,880
Special Reserve—premium on gold sold	5,755	4,755	Debentures and other Securities ..	155,702	158,521
Other Liabilities(*a*) ..	1,975	2,076	Other Assets ..	78	73
Total Liabilities ..	206,660	209,474	Total Assets ..	206,660	209,474

(*a*) Notes of a denomination not exceeding one pound which have been on issue for more than twenty years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item "Notes on Issue" but are included in the item "Other Liabilities".

Until the end of 1943 all the net profits of the Note Issue Department, except £2,000,000 paid between 1926 and 1933 to the capital account of the Rural Credits Department, were paid to the Commonwealth Treasury. The Commonwealth Bank Act amendment of 1943 which established a Mortgage Bank Department (see page 570), provided for the transfer of £1,000,000 from the Special Reserve and for an annual payment of £150,000 from the Note Issue profits towards the capital of the new department, the latter payments to cease when the capital amounts to £4,000,000. In 1945–46 the net profits of the Note Issue Department amounted to £3,089,000, of which £2,939,000 was paid to the Commonwealth Treasury and £150,000 to the capital account of the Mortgage Bank Department.

In 1946–47 the net profits of the Note Issue Department amounted to £3,942,000 of which £3,792,000 was paid to the Commonwealth Treasury and £150,000 to the capital account of the Mortgage Bank Department.

§ 4. Legal Tender Extant.

Accurate information regarding the amount of legal tender in circulation is not available, but the following table gives an estimate of the amount of legal tender extant about the middle of the years 1939 and 1944 to 1947.

ESTIMATED LEGAL TENDER EXTANT : AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.
	£'000.	£'000.	£'000.	£'000.	£'000.
Australian Notes(*a*)—					
Held by Banks	14,829	15,253	15,934	17,291	19,037
Held by Public	32,701	174,258	169,810	181,673	183,643
Coin(*b*)—					
Gold(*c*)—Held by Banks (*d*) ..	79	69	59	78	81
Held by Public	..	..	..	..	..
Silver—Held by Banks (*d*) ..	2,508	3,884	4,340	6,077	5,168
Held by Public	6,843	18,141	20,503	20,237	21,114
Bronze—Held by Banks (*d*) ..	132	195	225	189	169
Held by Public	521	1,045	1,123	1,214	1,264
Total	57,613	212,845	211,994	226,759	230,476

(*a*) Last Monday in June to 1946. Last Wednesday in June for 1947. (*b*) *See* paragraph below. No allowance has been made for coin lost or destroyed, which, during the war years, may have been considerable. (*c*) Value—one sovereign equals £1. (*d*) At 30th June.

The figures given above for silver coin represent the total issues of Australian silver coin less the excess of exports of Australian coins to New Zealand and the Pacific Islands over the reimports of Australian coins. The amount of English coin in circulation in Australia is negligible, and, as it is not possible to ascertain accurately its volume, no allowance has been made for it. The figures given for bronze coins refer to the total issues of Australian coin, the small amount of United Kingdom coin in circulation being disregarded. Notes of trading banks outstanding, included in earlier issues of the Year Book, have been excluded as they are not legal tender.

B. BANKING.

§ 1. Cheque-Paying Banks.

1. **Banking Legislation.**—(i) *Commonwealth Legislation.* (*a*) *General.* Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money". The principal Commonwealth Acts at present in force relating to Banking are—

(*a*) The Commonwealth Bank Act 1945 which replaced the Commonwealth Bank Act 1911–1943, and provides for the constitution and management of the Commonwealth Bank and Commonwealth Savings Bank and the management of the Australian note issue ;

(*b*) The Banking Act 1945, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth ; and

(*c*) The Banking Act 1947, which provides for the expansion of the banking business of the Commonwealth Bank; the taking over, by the Commonwealth Bank, of the banking business in Australia of the private banks, and the acquisition of property used in that business ; and the prohibition of private banks carrying on banking business in Australia.

(*b*) *The Banking Act* 1945. *General.* The Banking Act 1945 is the first comprehensive piece of legislation passed by the Commonwealth Parliament under its powers to legislate with respect to banking. Except for war-time regulations, earlier Commonwealth legislation in relation to banking was limited in its effect and related only to certain phases of banking. The most important constituents of the earlier legislation were the Bank Notes Tax Act 1910 designed to stop the issue of bank notes by the trading banks, and the Commonwealth Bank Act 1911–1943 providing for the establishment and management of the Commonwealth Bank, the Australian note issue, the control of the exportation and mobilization of gold, the settling of bank clearings and the collection of banking statistics. The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks except State banks operating in Australia or Territories of the Commonwealth.

Objects. In introducing the Bill for the Banking Act 1945 the Commonwealth Treasurer stated that the objects of the Bill were :—

(*a*) To provide a legal framework, uniform throughout Australia, for regulating the banking system. (*b*) To safeguard depositors of the banks from loss. (*c*) To provide for the co-ordination of banking policy under the direction of the Commonwealth Bank. (*d*) To control the volume of credit in circulation and bank interest rates. (*e*) To mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy.

Provisions. The main provisions of the Act are as follows : (*a*) *Authority to carry on Banking Business.* Banking business can only be carried on by a body corporate in possession of an authority in writing granted by the Governor-General. A company which is not a bank but which conducts some banking business may be granted an exemption from some or all of the provisions of the Act. (*b*) *Protection of Depositors.* If it appears that a bank may be unable to meet its obligations or is about to suspend payments, the Commonwealth Bank may " assume control of and carry on the business of that bank ". Provision is made for the banks to supply to the Commonwealth Bank such information relating to their financial stability as is required. Each bank is required, unless otherwise authorized by the Commonwealth Bank, to hold assets (other than goodwill) in Australia of a value not less than the amount of its deposit liabilities in Australia. (*c*) *Special Deposits.* Banks may be required by the Commonwealth Bank to lodge deposits in a special account with the Commonwealth Bank. The amount to be deposited is fixed each month by the Commonwealth Bank; but no bank may be required to deposit an amount sufficient to make the total of its special account exceed the sum of any increase in its assets since 28th August, 1945, and its special deposit on that date under the National Security (War-time Banking Control) Regulations. Interest is paid on these deposits at a rate, not exceeding 17s. 6d. per cent. per annum, determined by the Commonwealth Bank. The special deposits can only be withdrawn with the permission of the Commonwealth Bank. (*d*) *Mobilization of Foreign Currency.* All banks may be required to transfer to the Commonwealth Bank a proportion (determined by the Commonwealth Bank) of their excess receipts of foreign currency in respect of their Australian business during any period. (*e*) *Advances and Investments.* The Commonwealth Bank may determine a general policy in relation to advances to be followed by Banks. Banks may not, except with the consent of the Commonwealth Bank, purchase or subscribe to Commonwealth, State and local and semi-governmental securities, and securities listed on a Stock Exchange in Australia. (*f*) *Foreign Exchange.* The Governor-General may make regulations for the control of foreign exchange, including the fixing of rates of exchange. (*g*) *Gold.* In Part IV. of the Act provision is made for the mobilization and control of gold if it is necessary for the protection of the currency or of the public credit of the Commonwealth. (*h*) *Interest Rates.* The Commonwealth Bank may, with the approval of the Commonwealth Treasurer, make regulations for the control of rates of interest payable to or by the banks or other persons in the course of banking business carried on by them. (*i*) *Other.* Other provisions of the Banking Act 1945 relate to the supply of statistics and other information by banks, the settlement of clearing balances between the banks, investigation of the accounts of banks by the Auditor-General, and restrictions on the use of the words " bank " or " savings bank " in relation to a business. Although a bank may be required to supply information relating to its financial stability and information needed for the determination of banking policy, it cannot be required to disclose details relating to the account of any individual customer. Except with the consent in writing of the Treasurer a bank may not conduct any banking business for a State or for any authority of a State including a local governing authority. This latter provision was held to be invalid by the High Court of Australia.

(*c*) *The Banking Act* 1947. *General.* This Act, which was assented to on 27th November, 1947, provides for the acquisition by the Commonwealth Bank of the Australian business and assets of the private banks operating in Australia, and for the prohibition of private banks from carrying on banking business in Australia. The Act does not apply to State Banks or savings banks.

Objects. The objects of the Act, set out in section 3, are as follows :—

"(*a*) The expansion of the banking business of the Commonwealth Bank as a publicly-owned bank conducted in the interests of the people of Australia and not for private profit ;

(*b*) the taking over by the Commonwealth Bank of the banking business in Australia of private banks and the acquisition on just terms of property used in that business ;

(*c*) the prohibition of the carrying on of banking business in Australia by private banks ".

Two main methods of acquisition are provided, viz. :—

(1) Voluntary or compulsory acquisition of the Australian businesses and assets of the private banks, and

(2) Compulsory acquisition of shares.

The first method may be applied to all banks, whether incorporated in Australia or overseas, and, in the case of banks incorporated in Australia, any part of their overseas assets may also be compulsorily acquired. Under the alternative method, the shares of a private bank may be acquired if the Treasurer is satisfied that the majority of its shares are registered in Australia.

Acquisition of Australian Business. As a preliminary step to the acquisition of the Australian business and assets of a private bank the Treasurer may invite that bank to make an agreement with the Commonwealth Bank, not later than a specified date, for the transfer of its business to the Commonwealth Bank. If no agreement is made the assets of the bank concerned become vested in, and its liabilities are assumed by, the Commonwealth Bank on the day following the specified date. A private bank may make an agreement for the transfer of its business to the Commonwealth Bank before it receives an invitation from the Treasurer to do so. In either case any such agreement must be approved by the Treasurer. In the event of a voluntary agreement for acquisition, the bank concerned and its shareholders are granted certain tax concessions.

Acquisition of Shares. The Commonwealth Bank, with the approval of the Treasurer, may purchase all or any of the shares in a private bank at a price not less than the market value in Australia of those shares on 15th August, 1947. If a majority of the shares in a private bank, incorporated in Australia, are situated in Australia, the Treasurer may, by notice published in the *Commonwealth Gazette*, declare that the Australian shares of that bank shall be vested in the Commonwealth Bank on a specified date and the Commonwealth Bank will thereupon become the holder of the shares and a member of the bank. The directors of a private bank, the shares of which have been compulsorily acquired, will cease to hold office on the date on which the acquisition becomes effective. The Governor of the Commonwealth Bank may appoint directors to carry on the management of the bank and these directors shall have full power to manage the bank, dispose of its Australian business to the Commonwealth Bank and dispose of all or any of the other business of the bank.

Compensation. Provision is made for fair and reasonable compensation to be paid by the Commonwealth Bank for all property or shares acquired. The amount of compensation payable may be determined by agreement but, failing agreement, it will be determined by the Federal Court of Claims established under the Act.

Federal Court of Claims. A Federal Court of Claims is established under the Act to hear and determine claims for compensation arising under this Act or, if the Governor-General makes regulations conferring jurisdiction, any other Commonwealth Act. A determination of the Court shall be final and conclusive and not subject to appeal to the High Court.

Prohibition of carrying on banking business. The private banks are prohibited from carrying on banking business in Australia after a date to be specified by the Treasurer. Until that date they are required to carry on normal business.

Protection of Staff. All officers of the private banks are protected in respect of continuance of employment, salaries and conditions of service. After acquisition of a private bank the Commonwealth Bank is required to employ all officers of the bank on terms not less favorable than those they previously enjoyed.

Other provisions. The Commonwealth Bank is required to provide adequate banking facilities, conduct its business without discrimination and to observe the practices and usages customary among bankers.

Although this Act provides for the acquisition of all private banks in Australia it does not affect the Banking Act 1945 which remains in force. The validity of the Act was challenged in the High Court by the private banks and the States of Victoria, South Australia and Western Australia, and, in a majority judgment delivered on 11th August, 1948, the Court held that certain vital sections were invalid. At the time of writing (December, 1948) the Privy Council had granted the Commonwealth Government leave to appeal against the decision of the High Court.

(*d*) *War-time Banking Control.* The National Security (War-time Banking Control) Regulations which operated from 26th November, 1941, provided for the control of the profits and the advance policy of the banks, supervision of their investments and the investigation and publication of their accounts. Maximum interest rates were fixed by orders issued under the National Security (Economic Organization) Regulations. More detailed information concerning the war-time control of banks appears in Official Year Book No. 36, p. 625.

(ii) *State Legislation.* State banking legislation relates to the incorporation of banks, the constitution and management of State banks and the collection and publication of returns for the protection of depositors. The Acts under which the various banks are incorporated differ. While most of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales by Act of Council 1817, the Bank of Australasia by Royal Charter, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, the newer banks are generally registered under a " Companies Act " or some equivalent Act. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks constituted under State Acts transacting general banking business are the Rural Bank of New South Wales, the State Bank of South Australia and the Rural and Industries Bank of Western Australia. Banks transacting business in any State were obliged under the State laws to furnish a quarterly statement of their assets and liabilities. In most States this statement was published in the Government *Gazette.* Since the Banking Act 1945 came into operation the banks have been relieved of their obligation to furnish this return.

2. **Royal Commission on Monetary and Banking Systems.**—A Royal Commission was appointed by the Commonwealth Government in November, 1935 to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, p. 1010.

3. **Presentation of Banking Statistics.**—Because of the different purposes they serve in the Australian financial system Australian cheque-paying banks have for statistical purposes been divided into three groups and a separate series is presented for each of these groups. These groups are :—

(*a*) *The Commonwealth Bank.* This is the Central Bank. It also transacts general banking business through a General Banking Division. Statistics of the Central Banking Business (including the Note Issue Department) and the General Banking Division are presented in separate series.

(*b*) *Nine Trading Banks.* With the General Banking Division of the Commonwealth Bank these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—The Bank of New South Wales, the Commercial Banking Company of Sydney Ltd., The National Bank of Australasia Ltd., the Commercial Bank of Australia Ltd., The Queensland National Bank Ltd., The Bank of Adelaide, The Bank of Australasia, The Union Bank of Australia Ltd., and The English, Scottish and Australian Bank Ltd.

(c) *Other Banks.* This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, The State Bank of South Australia and the Rural and Industries Bank of Western Australia which, in their general banking business, specialize mainly in financing rural industries, (ii) two joint stock banks—The Ballarat Banking Co. Ltd. and the Brisbane Permanent Building and Banking Co. Ltd. which have specialized business in two districts only, and (iii) branches of three overseas banks—The Bank of New Zealand, Comptoir National D'Escompte de Paris and the Bank of China which transact limited business in Australia and are mainly concerned with financing trade, etc. between Australia and the overseas countries concerned.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the General Banking Division of the Commonwealth Bank, the Nine Trading Banks and the other cheque-paying banks included in the third group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the several weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

Until December, 1946 these balance days were the Mondays of each week. From January, 1947 Wednesday became the weekly balance day.

Under the Banking Act 1945 the returns furnished by cheque-paying banks were slightly modified and the figures quoted in the following pages may not in all cases be strictly comparable with those quoted in earlier issues of the Official Year Book. The main changes relate to the classification of assets and liabilities. Under the Commonwealth Bank Act 1945, the Commonwealth Bank was reorganized and figures quoted for this Bank are not comparable with those published in previous issues of the Official Year Book.

4. **Banks Transacting Business in Australia.**—(i) *Number of Branches.* At 30th June, 1947, the 18 banks operating in Australia transacted all classes of banking business at 2,648 branches and 880 agencies. The Commonwealth Bank of Australia and the Nine Trading Banks have branches throughout the Commonwealth. The Rural Bank of New South Wales, State Bank of South Australia and Rural and Industries Bank of Western Australia, being State Government banks specializing mainly in financing rural industries, have branches only in those States. Two banks, the Ballarat Banking Company Ltd. and the Brisbane Permanent Building and Banking Co. Ltd., transact business only in Ballarat and Brisbane respectively. The remaining three banks are branches of oversea banks.

CHEQUE-PAYING BANKS : NUMBER OF BRANCHES(a) AT 30th JUNE, 1947.

Banks.	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Bank of Australia	227	40	53	11	37	4	2	1	375
Nine Trading Banks ..	749	629	356	205	165	53	5	5	2,167
Other Cheque-paying Banks	61	4	1	18	22	..	..	..	106
All Cheque-paying Banks—									
Metropolitan areas ..	366	273	63	62	59	8	2	..	833
Elsewhere	671	400	347	172	165	49	5	6	1,815
Total	1,037	673	410	234	224	57	7	6	2,648

(a) Includes Head Offices. Excludes 880 agencies.

(ii) *Capital Resources, etc.* The paid-up capital of cheque-paying banks (excluding the three overseas banks, the Bank of New Zealand, the Bank of China and the Comptoir National D'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1947. It must be noted that, in the case of some of the banks, the reserve funds are invested in Government securities, while in other cases they are used in the ordinary business of the banks, and in a few instances they are partly invested and partly used in the business :—

CHEQUE-PAYING BANKS : CAPITAL RESOURCES, 1946–47.

Bank.	Paid-up Capital.	Reserves.	Balance on Profit and Loss Account. (*a*)	Total Share-holders' Funds.	Reserve Liability of Share-holders.(*b*)	Profits for year.	Net Dividends. (*c*)
Australian Joint Stock Banks—	£	£	£	£	£	£	£
Bank of New South Wales	8,780,000	6,150,000	538,227	15,468,227	8,780,000	636,249	581,675
Commercial Banking Co. of Sydney Ltd.	4,739,012	4,300,000	324,494	9,363.506	4,739,013	393,294	355,426
National Bank of Australasia Ltd.(*d*) ..	6,726,025	3,300,000	367,909	10,393,934	1,800,000	421,951	351,781
Commercial Bank of Australia Ltd. ..	4,117,350	2,250,000	246,143	6,613.493	..	283,174	244,694
Ballarat Banking Co. Ltd.	159,000	138,500	10,141	307,641	141,000	13,986	9,142
Queensland National Bank Ltd.(*d*) ..	1,750,000	860,000	48,366	2,658,366	..	92,184	65,625
Brisbane Permanent Building and Banking Co. Ltd. ..	750,000	250,000	30,969	1,030,969	..	46,157	45,000
Bank of Adelaide ..	1,250,000	1,000,000	98,142	2,348,142	1,250,000	79,970	71,875
Bank of Australasia	4,500,000	4,500,000	522,737	9,522,737	4,500,000	305,703	279,551
Union Bank of Australia Ltd. ..	4,000,000	4,850,000	397,772	9,247,772	8,000,000	274,674	248,490
English, Scottish and Australian Bank Ltd.	3,765,000	2,277,825	544,094	6,586,919	2,510,000	283,530	207,075
Total Australian Joint Stock Banks ..	40,536,387	29,876,325	3,128,994	73,541,706	31,720,013	2,830,872	2,460,334
Other Cheque-paying Banks—							
Commonwealth Bank of Australia—							
Central Banking Business ..	4,000,000	711,815	..	4,711,815	..	700,319	..
General Banking Division ..	4,000,000	342,290	..	4,342,290	..	350,427	..
Rural Credits Department	2,000,000	480,305	..	2,480,305	..	36,575	..
Mortgage Bank Department ..	2,392,225	58,880	..	2,451,105	..	30,274	..
Industrial Finance Department ..	4,000,000	29,799	..	4,029,799	..	23,514	..
Rural Bank of New South Wales—							
Rural Bank Department	*e*11,239,751	*f*4,061,561	..	15,301,312	..	42,723	..
Advances for Homes Department ..	*e*9,714,176	1,126,247	..	10,840,423	..	25,703	..
Personal Loans Department ..	506,900	..	−4,147	502.753	..	899	..
State Bank of South Australia—							
General Banking Department ..	819,558	571,581	..	2,281,613	..	14,429	..
Credit Foncier Department ..	196,415					18,653	..
State Bank Act 1925–41, Part VIA. ..	694,059					3,025	..
Rural and Industries Bank of Western Australia (Rural Department) ..	4,474,152	24,600	..	4,498,752	..	11,357	..

(*a*) Includes dividends declared but not paid at date of balance-sheet. (*b*) Includes uncalled capital. (*c*) Dividends paid and payable out of profits earned during 1946–47. (*d*) In July, 1947 the arrangements were completed for the amalgamation of the National Bank of Australasia Ltd. and the Queensland National Bank Ltd. During this month the National Bank of Australasia Ltd. issued shares to the value of £1,726,025 in exchange for Queensland National Bank Ltd. shares. (*e*) Total stocks and debentures issued including liability in respect of deposits taken over by the Commonwealth Bank in December, 1931. (*f*) Includes £2,944,059 Special Reserve Account established under Section 12 (2) of Rural Bank of New South Wales Act 1932.

NOTE.—Minus sign (−) indicates loss. In the table all items other than paid-up capital and reserve funds of the Bank of Australasia and the Union Bank of Australia Ltd. are in Australian currency.

5. **Commonwealth Bank.**—(i) *General.* A brief account of the foundation of the Commonwealth Bank is given in Nos. 6 to 10 of the Official Year Book. The Bank began operations in the Savings Bank Department in July, 1912, and general banking was commenced in January, 1913. In 1920 the Australian note issue passed to the control of the Bank.

The scope of the Bank was considerably broadened in 1924 when the control was entrusted to a Board of Directors consisting of a Governor, the Secretary to the Treasury and six others who were or had been actively engaged in agriculture, commerce, finance or industry. Commencing without capital the Bank had accumulated profits amounting to about £4,500,000 in 1924. Of this sum, £4,000,000 was transferred to the capital fund of the Bank, and authority was given to increase the capital to £20,000,000. The profits of the Bank, until the establishment of the Mortgage Bank Department, were distributed in the proportion of one-half to the Bank Reserve Fund and the other half to the National Debt Sinking Fund. This excluded the net earnings of the Note Issue Department, which were paid to the Consolidated Revenue Fund. Under the terms of the Commonwealth Bank Act, as amended in March, 1943, one-quarter of the profits of the General Bank Department were to be paid to the Reserve Fund, one-quarter to the Mortgage Bank Department and one-half to the National Debt Sinking Fund. Of the net profits of the Note Issue Department, £150,000 per annum was to be paid to the Mortgage Bank Department and the balance to the Consolidated Revenue Fund. The distribution of the profits of the Savings Bank was not affected by the amendment.

A Rural Credits Department of the Bank was created, by amending legislation in 1925, for the purpose of making short-term credit available for the orderly marketing of primary produce. Portion of the capital for the new department, to the extent of £2,000,000, was provided by an annual appropriation of 25 per cent. of the net profits of the Note Issue Department. One half of the profits of the Rural Credits Department is paid to Reserve Fund and one half to the Development Fund.

The Commonwealth Bank Act 1927 provided for the separation of the Savings Bank Department from the General Bank and its establishment as a separate institution, and the transfer to the "Commonwealth Savings Bank of Australia" of all assets and liabilities of the Savings Bank Department. The date on which this amending Act became operative was fixed by proclamation as 9th June, 1928. The new institution was to be managed by a Commission consisting of three Commissioners, one of whom was to be a member of the Bank Board. The Commissioners were never appointed and this provision was omitted in the Commonwealth Bank Act 1945.

A Mortgage Bank Department of the Bank was established by the Commonwealth Bank Act 1943, assented to on 20th March, 1943. The object is to make long term loans, at reasonable rates of interest and repayment, to primary producers for uses in connexion with primary production or to discharge prior mortgages or charges. Loans are to be secured by mortgages, and have a duration of between five and forty-one years inclusive. They are not to exceed 70 per cent. of the value of the estate or interest in land on which the loans are secured, or £5,000, whichever is the less. Provision was made for the repayment of interest and principal by equal half-yearly instalments of six months' interest together with an amount of not less than one-half of one per cent. of the original amount lent, the balance outstanding, if any, to be paid at the end of the period of the loan. Provision was also made for the repayment of loans before maturity. The capital of the Mortgage Bank Department is not to exceed £4,000,000 and will be derived as follows:—(*a*) £1,000,000 from the Note Issue Department's special reserve from the sale of gold; (*b*) one-quarter of the annual net profits of the General Bank Department (now Central Banking Business); and (*c*) £150,000 per annum from the net profits of the Note Issue Department. Payments from the last two sources will cease when the capital amounts to £4,000,000. In addition, provision exists for advances to be made to the Mortgage Bank Department by the Commonwealth Bank, the Commonwealth Savings Bank and the Treasurer, who may borrow money for this purpose. The net profits of the Mortgage Bank Department are credited to the Mortgage Bank Department Reserve Fund.

(ii) *Commonwealth Bank Act* 1945. (*a*) *General.* The constitution of the Commonwealth Bank was revised by the Commonwealth Bank Act 1945, assented to on 3rd August, 1945. All provisions of the Act came into operation on 21st August, 1945, except those relating to the Industrial Finance Department and Housing Loans which came into operation on 2nd January, 1946.

In introducing the Bill for the Commonwealth Bank Act 1945, the Commonwealth Treasurer said that the main purposes of the Bill were :—" (*a*) To strengthen the central banking functions of the Bank. (*b*) To ensure that the financial policy of the Bank will be in harmony with the main decisions of Government policy and in the interests of the people of Australia. (*c*) To ensure the development and expansion of its general banking functions by active competition with the trading banks. (*d*) To return control of the Bank to the Governor who will be assisted by an Advisory Council. (*e*) To assist in developing small industries and in enabling the people to secure homes."

The general functions of the Bank are set out in the form of a charter in section 8 of the Act which states :—

> " 8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, will best contribute to :—
>
> (*a*) the stability of the currency of Australia ; (*b*) the maintenance of full employment in Australia ; and (*c*) the economic prosperity and welfare of the people of Australia."

Provision is made for the Bank to inform the Treasurer of its monetary and banking policy. If there is a difference of opinion between the Bank and the Government on monetary and banking policy, the Treasurer and Bank shall endeavour to reach an agreement. Failing such an agreement the Bank shall give effect to the policy laid down by the Government.

(*b*) *Central Banking Business.* Under the powers it possessed under the Commonwealth Bank Act 1911–1943 and under its war-time powers under the National Security Regulations, the Commonwealth Bank had gradually assumed the functions of a Central Bank. Part III. of the Act formally constitutes the Commonwealth Bank as a Central Bank and grants the Bank the necessary powers to carry on the business of a Central Bank. The capital for its Central Banking Business is £4,000,000 provided from the existing Capital and Reserve Fund of the Commonwealth Bank, and such other sums as are transferred from the Reserve Fund. The profits of the Central Banking Business are distributed as follows :—

(*a*) One quarter to be placed to the credit of the Commonwealth Bank Reserve Fund ; (*b*) one-quarter to be paid to the Mortgage Bank Department ; (*c*) one-half to be paid to the National Debt Sinking Fund.

When the capital of the Mortgage Bank Department has reached £4,000,000 the share of profits payable to that Department will be credited to the Commonwealth Bank Reserve Fund.

(*c*) *General Banking Division.* Under the Commonwealth Bank Act 1911–1943, no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945 the General Banking Division was set up to carry on the general banking business of the bank. The accounts and transactions of this division are kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division is £4,000,000 provided from the existing Capital and Reserve Fund of the Bank, and such other sums as are transferred from the General Banking Division Reserve Fund. The profits of the General Banking Division are distributed as follows :—

> (*a*) One half to be placed to the credit of the General Banking Division Reserve Fund, and (*b*) one-half to be paid to the National Debt Sinking Fund.

(*d*) *Management.* The management of the Bank is placed under the Governor of the Bank. The Governor is assisted by an Advisory Council consisting of the Secretary to the Department of the Treasury, the Deputy Governor of the Bank, an additional representative of the Department of the Treasury and two officers of the Bank. The Advisory Council advises the Governor with respect to the monetary and banking policy of the Bank and such other matters as the Governor refers to it.

(*e*) *Rural Credits Department.* The Rural Credits Department, established in 1925, is continued in the same form under this Act. The power of the Bank to issue debentures for the purposes of this department has been discontinued and the range of securities against which the department may make advances has been extended.

(*f*) *Mortgage Bank Department.* The Mortgage Bank Department established in 1943 is continued in the same form under this Act.

(*g*) *Industrial Finance Department.* The functions of the Industrial Finance Department established under this Act are :—

> " (*a*) to provide finance for the establishment and development of industrial undertakings ; (*b*) to assist in the establishment and development of industrial undertakings ; and (*c*) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof."

To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department shall be £4,000,000. Two million pounds is to be provided from the Special Reserve Account of the Note Issue Department and the other £2,000,000 is to be transferred as required from the other funds of the Bank. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the Department are to be placed to the credit of the Industrial Finance Department Reserve Fund. This Department commenced business on 2nd January, 1946.

(*h*) *Housing Loans.* Special provisions are included to permit the Bank, through the General Banking Division, to make loans to individuals or building societies for the erection or purchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on *crédit foncier* terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.

(*i*) *The Commonwealth Bank Service.* Conditions of appointment and service of officers of the Bank are set out in Part XIII. of the Act. Appointments to the service of the Bank shall be made on the results of a competitive examination. Provision is made for the classification of positions in the bank and for the protection of officers with respect to promotions, tenure of office, dismissal and punishment.

(*j*) *Other.* The Note Issue Department and the Commonwealth Savings Bank are continued in the same form by the Act. Alterations to provisions under previous Acts affecting these sections are dealt with, in the case of the Note Issue Department, in the part of this chapter relating to Currency, and in the case of the Commonwealth Savings Bank in § 2 of this Part.

(iii) *Liabilities and Assets—All Departments.* Liabilities and assets of each department of the Commonwealth Bank at 30th June, 1947 are shown in the following table. The Commonwealth Savings Bank, which is operated as a separate institution, is not included (see §2, para. 11 (iii) following) :—

COMMONWEALTH BANK : LIABILITIES AND ASSETS, 30th JUNE, 1947.

Item.	Central Banking Business.	General Banking Division.	Note Issue Department.	Rural Credits Department.	Mortgage Bank Department.	Industrial Finance Department.	Total. (a)
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
			LIABILITIES.				
Capital	4,000	4,000	..	2,000	2,392	4,000	16,392
Reserve Funds	712	342	..	480	59	30	1,623
Special Reserve—Premium on gold sold	..	..	4,755	..	..	..	4,755
Development Fund	..	..	..	52	..	..	52
Notes on Issue	..	..	202,643	..	..	..	202,643
Deposits, bills payable and other liabilities—							
Special accounts of Trading Banks	268,834	..	..	..	..	..	268,834
Other deposits of Trading Banks	24,198	..	..	..	..	..	24,198
Other (including provision for contingencies)	140,662	74,756	2,076	801	759	381	212,387
Total Liabilities.. ..	438,406	79,098	209,474	3,333	3,210	4,411	730,884
			ASSETS.				
Gold and balances held abroad (including money at short call) ..	133,144	2,587	50,880	..	..	..	186,611
Australian notes and coin and cash balances	2,662	4,281	..	(b) 971	..	(b) 100	6,943
Cheques and bills of other banks ..	6,077	381	..	..	..	..	6,458
Commonwealth Government securities (including Commonwealth Treasury Bills)	274,457	35,565	158,521	1,454	..	600	470,597
Securities of other Governments, and of local and semi-governmental authorities	5,804	..	..	..	..	..	5,804
Bills receivable and remittances in transit	573	13,364	..	..	..	..	13,937
Bank premises	235	645	..	..	..	..	880
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful)	15,454	22,275	73	908	3,210	3,711	39,654
Total Assets	438,406	79,098	209,474	3,333	3,210	4,411	730,884

(*a*) Inter-departmental accounts totalling £7,048,000 have been offset in the combined figures. (*b*) Cash balances.

(iv) *Profits.* Net profits of the various departments of the Commonwealth Bank for each year from 1937–38 to 1946–47 were as follows :—

COMMONWEALTH BANK : NET PROFITS.

Year ended 30th June—	General Bank Department.	Central Banking Business. (a)	General Banking Division. (a)	Note Issue Department.	Rural Credits Department.	Mortgage Bank Department. (b)	Industrial Finance Department. (c)	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938	331	..	..	840	33	..	..	1,204
1939	356	..	..	767	32	..	..	1,155
1940	457	..	..	986	38	..	..	1,481
1941	386	..	..	1,462	48	..	..	1,896
1942	527	..	..	1,658	47	..	..	2,232
1943	873	..	..	2,248	44	..	..	3,165
1944	985	..	..	2,743	38	−13	..	3,753
1945	957	..	..	3,098	37	16	..	4,108
1946	..	670	334	3,090	33	25	6	4,158
1947	..	700	350	3,942	37	30	24	5,083

(*a*) Created separate departments from 21st August, 1945. Previously combined under General Bank Department. (*b*) Commenced business 27th September, 1943. (*c*) Commenced business 2nd January, 1946.

(v) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the quarters ended December, 1945 to December, 1947 are shown in the two tables which follow :—

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES.

Quarter ended	Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Liabilities.	Total Liabilities.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945	11,124	191,589	229,064	27,507	142,625	601,909
March, 1946	10,124	194,797	243,528	31,047	144,407	623,903
June, 1946	10,124	197,829	260,388	22,415	146,109	636,865
September, 1946 .. .	10,184	197,806	255,151	22,962	137,475	623,578
December, 1946	10,292	199,757	259,539	25,023	118,201	612,812
March, 1947	9,292	198,576	273,882	27,737	108,819	618,306
June, 1947	9,292	201,527	280,672	20,896	121,706	634,093
September, 1947	9,346	203,854	245,296	25,008	123,138	606,642
December, 1947	9,467	197,893	250,706	26,964	136,672	621,702

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS.

Quarter ended—	Gold and Balances held abroad.	Australian Coin.	Cheques and Bills of Other Banks.	Government and Other Securities (including Commonwealth Treasury Bills.)	Bills Receivable and Remittances in Transit.	Other Assets.	Total Assets.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945	170,217	2,855	1,964	416,768	2,356	7,749	601,909
March, 1946	182,256	3,393	1,962	421,911	1,490	12,891	623,903
June, 1946	200,319	3,773	3,040	416,973	1,382	11,378	636,865
September, 1946	210,210	3,873	2,475	400,764	663	5,593	623,578
December, 1946	220,077	3,653	2,668	382,322	327	3,765	612,812
March, 1947	221,098	3,151	2,306	385,787	142	5,822	618,306
June, 1947	220,020	2,728	2,951	398,840	108	9,446	634,093
September, 1947	177,205	6,200	2,367	412,666	169	8,035	606,642
December, 1947	175,980	5,730	2,874	426,492	64	10,562	621,702

(vi) *General Banking Division—Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of the General Banking Division of the Commonwealth Bank for the quarters ended December, 1945 to December, 1947 are shown in the following tables :—

COMMONWEALTH BANK : GENERAL BANKING DIVISION—AVERAGE LIABILITIES WITHIN AUSTRALIA.(a)

Quarter ended—	Interminable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Balances due to Other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945..	..	33,269	21,753	55,022	..	348	2,987	58,357
March, 1946 ..	..	35,541	21,681	57,222	..	347	2,978	60,547
June, 1946 ..	..	38,335	19,971	58,306	..	340	2,314	60,960
September, 1946	..	38,262	18,531	56,793	..	335	1,647	58,775
December, 1946..	..	40,013	18,212	58,225	..	364	1,257	59,846
March, 1947 ..	..	40,686	17,347	58,033	..	372	1,447	59.852
June, 1947 ..	..	44,126	16,116	60,242	..	340	1,312	61,894
September, 1947	..	40,804	14,864	55,668	..	370	1,600	57,638
December, 1947..	..	42,535	14,092	56,627	..	349	1,450	58,426

(a) Includes Territories of Papua and New Guinea.

COMMONWEALTH BANK : GENERAL BANKING DIVISION—AVERAGE ASSETS WITHIN AUSTRALIA.(*a*)

Quarter ended—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with Other Banks. (*b*)	Australian Public Securities.		Other Securities.	Loans, Advances, and Bills Discounted.	All Other Assets.	Total Assets.
				Treasury Bills.	Other.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945	9,235	..	168	5,000	33,321	..	14,511	1,461	63,696
March, 1946 ..	7,117	..	182	3,833	33,920	..	19,080	1,500	65,632
June, 1946 ..	5,380	..	249	3,423	34,169	..	21,040	2,121	66,382
September, 1946	7,060	..	217	2,215	33,695	..	19,507	1,578	64,272
December, 1946	5,848	..	207	2,000	35,625	..	19,426	2,136	65,242
March, 1947 ..	6,686	..	238	1,042	34,250	..	21,004	1,724	64,944
June, 1947 ..	6,591	..	260	2,288	33,680	..	21,712	1,888	66,419
September, 1947	5,615	..	223	538	32,565	..	22,214	1,838	62,993
December, 1947	6,721	..	295	428	32,208	..	21,851	1,944	63,447

(*a*) Includes Territories of Papua and New Guinea. (*b*) Includes notes, cheques and bills of other Banks.

6. **Nine Trading Banks.**—(i) *Average Liabilities and Assets in Australia.* The average liabilities and assets within Australia of the Nine Trading Banks for the years ended June, 1938 to 1947 and the quarters ended December, 1945 to December, 1947 are shown in the following tables. A list of these banks is given in para. 3, page 567.

NINE TRADING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.

Period.	Interminable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Year ended June—								
1938.. ..	2,663	*a*120,022	194,785	314,807	167	1,030	*b*2,911	321,578
1939.. ..	2,644	*a*118,868	198,793	317,661	167	921	*b*3,005	324,398
1940.. ..	2,630	*a*130,028	205,235	335,263	167	905	*b*3,288	342,253
1941.. ..	2,619	*a*152,377	206,124	358,501	167	1,002	*b*3,398	365,687
1942.. ..	2,611	*a*178,438	199,827	378,265	167	1,112	*b*3,642	385,797
1943.. ..	2,597	*a*233,299	193,357	426,656	167	1,069	*b*4,125	434,614
1944.. ..	2,511	*a*290,988	211,703	502,691	166	1,016	*b*4,485	510,869
1945.. ..	1,850	*a*343,773	224,023	567,796	166	1,083	*b*4,843	575,738
1946(*c*) ..	1,664	385,953	220,415	606,368	166	1,194	6,338	615,730
1947 ..	889	429,749	206,862	636,611	159	1,748	7,792	647,199
Quarter ended—								
December, 1945	1,664	371,835	222,666	594,501	166	1,358	6,432	604,121
March, 1946 ..	1,646	406,097	220,195	626,292	166	1,174	6,502	635,780
June, 1946 ..	1,646	417,193	214,482	631,675	166	1,218	7,416	642,121
September, 1946	910	406,639	210,595	617,234	162	1,444	7,664	627,414
December, 1946	905	421,018	207,011	628,029	158	1,914	7,749	638,755
March, 1947 ..	891	443,344	206,183	649,527	158	1,743	7,612	659,931
June, 1947 ..	847	450,817	203,322	654,139	158	1,913	8,139	665,196
September, 1947	743	430,551	202,754	633,305	158	3,283	7,519	645,008
December, 1947	730	456,587	203,369	659,956	158	7,166	8,448	676,458

(*a*) Includes Other Liabilities. (*b*) Excludes Other Liabilities. (*c*) Includes Territories of Papua and New Guinea for this and following periods.

NINE TRADING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA.

Period.	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with Other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All Other Assets.	Total Assets.
				Treasury Bills.	Other.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Year ended June—									
1938.. ..	37,114	..	3,958	20,728	b21,411	(c)	d274,365	e8,936	366,512
1939.. ..	33,597	..	3,938	21,533	b20,477	(c)	d288,109	e9,421	377,075
1940.. ..	37,932	..	4,084	31,329	b30,165	(c)	d288,434	e9,849	401,793
1941.. ..	41,163	..	4,993	39,937	b52,903	(c)	d282,426	e10,239	431,661
1942.. ..	41,415	16,848	5,899	42,267	b59,640	(c)	d273,729	e10,105	449,903
1943.. ..	43,322	68,420	6,765	59,443	b62,907	(c)	d248,719	e9,925	499.501
1944.. ..	40,908	139,965	7,334	63,826	b79,961	(c)	d232,421	e9,787	574,202
1945.. ..	38,038	207,992	7,744	60,283	b105,842	(c)	d208,719	e9,776	638,394
1946(f) ..	38,462	238,098	8,748	59,782	b115,272	(c)	d214,401	e9,802	684.565
1947 ..	37,928	264,991	10,302	25,831	95,026	164	261,140	14,280	709,662
Quarter ended—									
December, 1945	40,384	227,311	8,959	63,008	113,049	164	209,291	12,361	674,527
March, 1946 ..	43,276	241,546	8,424	72,797	118,903	169	208,611	12,444	706,170
June, 1946 ..	34,174	258,261	9,569	51,224	122,775	165	219,698	13,063	708,929
September, 1946	35,228	253,051	9,603	23,779	113,303	165	239,456	13,851	688,436
December, 1946	39,047	257,805	10,454	24,608	98,949	165	257,544	14,347	702,919
March, 1947 ..	42,317	271,843	10,183	34,397	84,440	165	265,434	14,232	723.011
June, 1947 ..	35,665	278,709	11,015	21,358	81,192	159	284,123	14,721	726,942
September, 1947	40,816	243.766	10,712	11,885	76,665	g 1,803	308,526	15,360	709,533
December, 1947	43,978	249,103	13,473	13,946	67,141	g 1,924	330,991	16,455	737.011

(a) Includes Notes, Cheques and Bills of Other Banks. (b) Government and Municipal Securities. (c) Included with Loans, Advances and Bills Discounted. (d) Includes Other Assets—*see* notes (c) and (e). (e) Landed and House Property only. Other assets included with Loans, Advances and Bills Discounted. (f) Includes Territories of Papua and New Guinea for this and following periods. (g) Includes shares held by National Bank of Australasia Ltd. in Queensland National Bank Ltd. (in voluntary liquidation).

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Nine Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1938 to 1947. The ratios are based on the average liabilities and assets for the years shown.

NINE TRADING BANKS: RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.

Year ended June—	Percentage of Total Deposits.						
	Cash and Cash Balances.	Treasury Bills.	Government and Municipal. Securities. (a)	Special Account with Commonwealth Bank.	Advances.	Deposits.	
						Not Bearing Interest.	Bearing Interest.
	%	%	%	%	%	%	%
1938	11.8	6.6	6.7	..	87.2	38.1	61.9
1939	10.6	6.8	6.5	..	90.7	37.4	62.6
1940	11.3	9.3	9.0	..	86.0	38.8	61.2
1941	11.5	11.1	14.8	..	78.8	42.5	57.5
1942	11.0	11.2	15.8	4.4	72.4	47.2	52.8
1943	10.2	13.9	14.7	16.0	58.3	54.7	45.3
1944	8.1	12.7	15.9	27.8	46.2	57.9	42.1
1945	6.7	10.6	18.6	36.6	36.8	60.6	39.4
1946	6.3	9.9	19.0	39.3	35.0	63.7	36.3
1947	6.0	4.1	14.9	41.6	41.0	67.5	32.5

(a) Excludes Treasury Bills.

(iii) *Proportion of Non-Interest bearing to Total Deposits.* The following table shows for each State, the proportion of non-interest bearing deposits to total deposits with the Nine Trading Banks for each of the ten years ended June, 1938 to 194/ The ratios are based on the average deposits for the years shown.

NINE TRADING BANKS: PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
	%	%	%	%	%	%	%	%	%
1938	44.2	31.2	45.7	27.0	47.3	34.9	66.2	31.1	38.1
1939	43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1940	45.7	31.5	45.2	26.9	45.3	37.9	66.6	24.6	38.8
1941	49.8	35.3	48.5	30.1	46.1	40.4	68.1	26.9	42.5
1942	53.8	40.8	51.7	35.3	51.5	45.6	71.3	28.2	47.2
1943	59.4	49.9	60.3	42.3	59.4	52.6	72.3	31.6	54.7
1944	61.6	53.0	64.9	46.0	61.8	55.4	76.6	34.0	57.9
1945	63.8	55.9	67.6	49.2	63.2	57.7	100.0	37.2	60.6
1946	66.1	60.5	69.4	51.4	66.2	62.6	77.2	42.4	63.7
1947	69.7	65.6	71.4	55.7	69.8	65.2	77.8	47.6	67.5

(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits, for each State and for the years ended June, 1938 to 1947, are shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

NINE TRADING BANKS: RATIO OF ADVANCES TO TOTAL DEPOSITS.

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
	%	%	%	%	%	%	%	%	%
1938	98.5	68.9	98.5	76.4	149.3	61.7	18.2	41.0	87.2
1939	104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1940	96.6	69.8	95.2	72.5	147.7	55.4	21.7	34.7	86.0
1941	84.3	68.5	89.1	62.7	130.6	53.0	20.7	30.3	78.8
1942	76.9	62.2	88.4	56.3	116.8	45.9	14.0	30.4	72.4
1943	62.4	54.8	58.5	43.9	87.7	32.5	7.9	22.2	58.3
1944	46.7	50.3	36.5	38.8	64.9	24.4	45.1	10.0	46.2
1945	38.6	36.9	30.3	33.7	54.6	21.0	92.0	18.2	36.8
1946	37.6	32.6	31.0	33.6	53.7	20.7	11.5	18.1	35.0
1947	43.1	39.4	37.8	38.4	55.5	29.2	16.2	21.1	41.0

7. **Other Cheque-paying Banks.**—*Liabilities and Assets within Australia.* The average liabilities and assets within Australia of "other cheque-paying banks" for the quarters ended December, 1945 to December, 1947 are shown in the following tables. A list of these banks is given in para. 3, page 568.

OTHER CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA.

Quarter ended—	Interminable Deposits or Deposit Stock.(*a*)	Deposits.			Notes in Circulation.	Balances due to Other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945 ..	12,645	7,225	4,842	12,067	..	66	537	25,315
March, 1946 ..	12,549	7,926	5,161	13,087	..	72	358	26,066
June, 1946 ..	12,490	8,320	5,183	13,503	..	86	595	26,674
September, 1946(*b*)	12,557	9,353	5,119	14,472	..	73	292	27,394
December, 1946 ..	12,321	9,847	5,107	14,954	..	93	311	27,679
March, 1947 ..	12,220	10,248	5,056	15,304	..	85	276	27,885
June, 1947 ..	12,166	10,524	5,025	15,549	..	121	298	28,134
September, 1947 ..	12,042	10,824	4,980	15,804	..	252	398	28,496
December, 1947 ..	11,936	11,205	5,117	16,322	..	655	468	29,381

(*a*) Inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia. (*b*) Includes Rural and Industries Bank of Western Australia for this and following periods.

OTHER CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA.

Quarter ended—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All Other Assets. (c)	Total Assets.
				Treasury Bills.	Other.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945	1,826	1,753	2,670	622	7,402	215	16,765	1,245	32,498
March, 1946 ..	2,205	1,982	2,302	1,104	7,446	219	16,839	1,238	33,335
June, 1946 ..	1,596	2,126	2,059	1,286	8,653	220	16,817	1,293	34,050
September, 1946*b*	2,517	2,100	2,094	550	8,556	315	21,625	1,969	39,726
December, 1946	2,239	1,734	1,965	840	8,634	282	22,524	2,153	40,371
March, 1947	2,808	2,039	1,490	633	8,440	228	23,218	2,388	41,244
June, 1947 ..	2,530	1,963	957	902	8,275	229	24,229	2,884	41,969
September, 1947	2,524	1,530	1,029	706	8,423	227	25,306	3,068	42,813
December, 1947	2,682	1,603	1,078	637	8,616	196	26,469	2,896	44,177

(*a*) Includes Notes, Cheques and Bills of Other Banks. (*b*) Includes Rural and Industries Bank of Western Australia for this and following periods. (*c*) Includes Rural and Industries Bank of Western Australia's account with State Treasury from quarter ended September, 1946.

8. **All Cheque-paying Banks.**—(i) *General.* Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia, including the General Banking Division of the Commonwealth Bank of Australia, are given in the following paragraphs. The Central Banking Business of the Commonwealth Bank of Australia is excluded.

(ii) *Liabilities and Assets within Australia.* The following tables show the average liabilities and assets within Australia of all cheque-paying banks for the quarters ended December, 1945 to December, 1947.

ALL CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA.(*a*)

Quarter ended—	Interminable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Balances due to Other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945..	14,309	412,329	249,261	661,590	166	1,772	9,956	687,793
March, 1946 ..	14,195	449,564	247,037	696,601	166	1,593	9,838	722,393
June, 1946 ..	14,136	463,848	239,636	703,484	166	1,644	10,325	729,755
September, 1946(*b*)	13,467	454,254	234,245	688,499	162	1,852	9,603	713,583
December, 1946..	13,226	470,878	230,330	701,208	158	2,371	9,317	726,280
March, 1947 ..	13,111	494.278	228,586	722,864	158	2,200	9,335	747,668
June, 1947 .	13,013	505,467	224,463	729,930	158	2,374	9,749	755,224
September, 1947..	12,785	482,179	222,598	704,777	158	3,905	9,517	731,142
December, 1947..	12,666	510,327	222,578	732.905	158	8.170	10.366	764.265

(*a*) Includes Territories of Papua and New Guinea. (*b*) Includes Rural and Industries Bank of Western Australia for this and following periods.

ALL CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA.(*a*)

Quarter ended—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with Other Banks.	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All Other Assets.	Total Assets.
				Treasury Bills.	Other.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945..	51,445	229,064	11,797	68,630	153,772	379	240,567	15,067	770,721
March, 1946 ..	52,598	243,528	10,908	77,734	160,269	388	244,530	15,182	805,137
June, 1946 ..	41,150	260,387	11,877	55,933	165,597	385	257,555	16,477	809,361
September, 1946(*b*)	44,805	255,151	11,914	26,544	155,554	480	280,588	17,398	792,434
December, 1946 ..	47,134	259,539	12,626	27,448	143,208	447	299,494	18,636	808,532
March, 1947 ..	51,811	273,882	11,911	36,072	127,130	393	309,656	18,344	829,199
June, 1947 ..	44,786	280,672	12,232	24,548	123,147	388	330,064	19,493	835,330
September, 1947..	48,955	245,296	11,964	13,129	117,653	2,030	356,046	20,266	815,339
December, 1947 ..	53,381	250,706	14,846	15,011	107,965	2,120	379,311	21,295	844,635

(*a*) Includes Territories of Papua and New Guinea. (*b*) Includes Rural and Industries Bank of Western Australia for this and following periods.

9. **Deposit Rates.**—Particulars of interest rates for fixed deposits since 1932 are shown hereunder. The rates paid by the Commonwealth Bank have not always been the same as those paid by the other trading banks.

BANK FIXED DEPOSIT RATES.

Dates from which rates operated.	Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
	Per cent. per annum.	Per cent. per annum.	Per cent. per annum.	Per cent. per annum.
8th March, 1932	2½	3	3½	4
May–June, 1932 (*a*)	2½	3	3¼	3½
1st November, 1932 (*b*)	2¼	2¾	3	3¼
7th February, 1933	2	2½	2¾	3
12th April, 1934	2	2¼	2½	2¾
9th August, 1934	1½	2¼	2½	2¾
11th October, 1934	1½	2	2¼	2½
17th December, 1934	1	1½	2¼	2½
24th March, 1936 (*c*)	2	2½	2¾	3
24th January, 1940	1¾	2¼	2½	2¾
28th May, 1940	1½	2	2¼	2½
22nd September, 1941	1½	1¾	2	2¼
14th March, 1942	1¼	1½	1¾	2
17th January, 1944	1	1¼	1½	2
11th August, 1944	½	¾	1¼	1¾
1st December, 1945	½	¾	1	(*d*) 1½

(*a*) All Banks did not take simultaneous action. (*b*) Bank of New South Wales reduced the rates for 6, 12 and 24 months terms by one-quarter of 1 per cent. from 23rd August, 1932. (*c*) Commonwealth Bank only. Bank of New South Wales from 2nd March and Bank of Adelaide from 3rd March, 1936. (*d*) On first £10,000 ; rate on amount in excess of £10,000 is 1 per cent.

10. **Clearing House Returns.**—(i) *Annual Clearings.* Particulars of the aggregate bank clearings for each capital city, compiled from information supplied by the Commonwealth Bank, Sydney, are given in the following table. Since October, 1920, transactions connected with the issue and redemption of Treasury Bills have resulted in largely inflated clearings. These transactions are of an abnormal character, and have been excluded from the table.

CLEARING HOUSE RETURNS : VALUE OF BILLS, CHEQUES, ETC.(*a*)

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938	942,423	838,609	217,217	159,015	109,102	30,786	2,297,152
1939	932,367	812,563	222,988	152,334	107,089	33,898	2,261,239
1940	1,074,825	985,407	251,326	179,314	119,989	36,662	2,647,523
1941	1,139,353	1,096,037	243,937	195,757	116,565	36,469	2,828,118
1942	1,248,500	1,263,869	275,639	220,475	125,116	40,385	3,173,984
1943	1,442,344	1,411,724	335,137	248,295	137,599	45,853	3,620,952
1944	1,499,603	1,446,607	369,016	266,123	144,699	52,136	3,778,184
1945	1,512,418	1,483,450	366,210	268,255	151,652	57,409	3,839,394
1946	1,854,271	1,825,987	389,642	321,043	189,747	65,671	4,646,361
1947	2,123,697	1,964,027	450,912	370,084	226,467	73,131	5,208,318

(*a*) Excludes Treasury Bill transactions.

(ii) *Index of Annual Clearings.* The following index of bank clearings in each capital city for the years 1938 to 1947 has been computed from the figures in the previous paragraph. The base used is the average of the years 1936 to 1938. Clearings connected with the issue and redemption of Treasury Bills have been excluded and no adjustment has been made on account of alterations in the banking system.

INDEX OF BANK CLEARINGS.

Base : Average of Years 1936 *to* 1938 = 1,000.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1936–38 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1938	1,039	1,032	1,067	1,045	1,036	1,046	1,039
1939	1,027	1,000	1,096	1,001	1,017	1,151	1,023
1940	1,184	1,212	1,235	1,178	1,140	1,245	1,198
1941	1,256	1,349	1,198	1,286	1,107	1,239	1,279
1942	1,376	1,555	1,354	1,449	1,188	1,372	1,436
1943	1,589	1,737	1,647	1,631	1,307	1,557	1,638
1944	1,653	1,780	1,813	1,749	1,374	1,771	1,709
1945	1,667	1,825	1,799	1,763	1,440	1,950	1,737
1946	2,043	2,247	1,914	2,109	1,802	2,231	2,102
1947	2,340	2,416	2,215	2,432	2,151	2,484	2,356

(iii) *Average Weekly Clearings.* The average weekly clearings in each capital city for the years ended on the last Monday in June, 1938 to 1947 and for the quarters ended December, 1945 to 1947 are shown in the following table. Transactions connected with the issue and redemption of Treasury Bills are excluded.

BANK CLEARINGS(*a*) : AVERAGE WEEKLY CLEARINGS.

Period.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Year ended June—							
1938 ..	17,964	16,323	4,038	3,040	2,092	577	44,034
1939 ..	17,832	15,415	4,212	2,953	2,055	623	43,090
1940 ..	19,541	17,661	4,670	3,246	2,234	697	48,049
1941 ..	21,194	19,784	4,726	3,499	2,229	672	52,104
1942 ..	22,747	22,823	4,815	3,970	2,336	731	57,422
1943 ..	26,084	25,830	5,904	4,532	2,489	813	65,652
1944 ..	28,071	27,051	6,816	4,924	2,719	943	70,524
1945 ..	28,556	27,839	6,895	5,127	2,777	1,032	72,226
1946 ..	30,968	31,398	7,154	5,593	3,257	1,185	79,555
1947 (*b*) ..	38,580	35,631	7,978	6,469	3,926	1,310	93,894
Quarter ended—							
December, 1945	29,775	29,663	7,427	5,304	3,157	1,166	76,492
March, 1946 ..	30,461	32,801	6,564	6,007	3,655	1,196	80,684
June, 1946 ..	33,732	35,065	7,075	6,153	3,411	1,242	86,678
September, 1946	38,453	35,063	7,754	6,098	3,691	1,288	92,347
December, 1946	38,877	36,886	8,380	6,349	3,787	1,302	95,581
March, 1947(*b*)	35,697	33,205	7,467	6,607	4,205	1,241	88,422
June, 1947(*b*)	41,114	37,244	8,292	6,860	4,056	1,406	98,972
September, 1947 (*b*) ..	40,391	37,736	8,865	6,923	4,058	1,468	99,441
December, 1947 (*b*) ..	44,987	41,807	9,787	7,895	4,987	1,477	110,940

(*a*) Excludes transactions connected with the issue and redemption of Treasury Bills. (*b*) Period ended on last Wednesday.

11. **Debits to Customers' Accounts.**—Statistics of debits to customers' accounts have been collected since September, 1945. Generally they represent the total of all cheques drawn by the customers of the banks. In the following table the average weekly debits to customers' accounts of all cheque-paying banks for each State for the quarters ended December, 1945 to December, 1947 are given.

AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS: ALL CHEQUE-PAYING BANKS.

Quarter ended—	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust. Cap. Terr.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
December, 1945 ..	50,985	43,074	15,165	7,906	5,540	2,783	97	125,550
March, 1946 ..	51,042	45,565	14,163	8,808	6,144	2,856	86	128,664
June, 1946 ..	57,954	50,248	15,166	9,390	6,161	3,125	106	142,150
September, 1946 ..	63,272	52,675	16,738	9,927	6,819	3,293	111	152,835
December, 1946 ..	65,118	58,102	17,534	10,282	7,028	3,307	110	161,481
March, 1947(*a*) ..	63,636	53,525	16,122	10,623	7,590	3,268	122	154,886
June, 1947 ..	70,761	57,495	17,446	11,047	7,379	3,627	134	167,889
September, 1947 ..	71,815	59,347	18,452	11,237	7,508	3,667	136	172,162
December, 1947 ..	80,552	65,757	21,085	12,753	8,884	3,903	134	193,068

(*a*) Periods ended last Wednesday for this and following periods (see para. 3, page 568).

12. **Rates of Exchange.**—(i) *Australia on London.* The following statement gives particulars of the telegraphic transfer rates of exchange, Australia on London, in operation since 10th March, 1930. In earlier issues particulars were given of the rates in operation since 16th October, 1913. The details given show the value in Australia of £100 in London according to the rates quoted by the Associated Banks for buying and selling £100 in London on telegraphic transfer. In December, 1931 the Commonwealth Bank Board undertook the responsibility of regulating sterling exchange and announcing rates each week.

RATES OF EXCHANGE: AUSTRALIA ON LONDON, TELEGRAPHIC TRANSFER.

Date on which Rate began to operate.	Buying.	Selling.
	£ *s.* *d.*	£ *s.* *d.*
10th March, 1930	103 10 0	104 2 6
24th March, 1930	106 2 6	106 10 0
9th October, 1930	108 10 0	109 0 0
6th January, 1931	115 2 6	115 10 0
13th January, 1931	118 0 0	118 7 6
17th January, 1931	125 0 0	125 10 0
29th January, 1931	130 0 0	130 10 0
3rd December, 1931 (*a*)	125 0 0	125 10 0

(*a*) Rates have remained unchanged since 3rd December,, 1931.

(ii) *London and Australia on New York.* The average of the daily quotations of the London-New York and Australia-New York exchange rates are given in the following table for each month from January, 1939 to December, 1947 :—

LONDON AND AUSTRALIA-NEW YORK EXCHANGE RATES : AVERAGE RATE FOR EACH MONTH.

Month.	London on New York.(*a*)		Australia on New York.(*b*)			
	1939.	1940 to 1947.	1939.	1940.	1941 to 1946.	1947.
	$ per £ Stg.	$ per £ Stg.	$ per £A.	$ per £A.	$ per £A.	$ per £A.
January ..	4.669	4.030	3.708	3.196	3.198	3.199
February ..	4.686	4.030	3.727	3.197	3.198	3.200
March ..	4.686	4.030	3.727	3.197	3.198	3.200
April ..	4.681	4.030	3.724	3.198	3.198	3.200
May ..	4.682	4.030	3.723	3.198	3.198	3.200
June ..	4.683	4.030	3.725	3.198	3.198	3.200
July ..	4.682	4.030	3.724	3.198	3.198	3.200
August ..	4.610	4.030	3.680	3.198	3.198	3.200
September ..	4.046	4.030	3.225	3.198	3.198	3.200
October ..	4.030	4.030	3.193	3.198	3.198	3.200
November ..	4.030	4.030	3.193	3.198	3.198	3.200
December ..	4.030	4.030	3.193	3.198	3.198	3.200

(*a*) Average of buying and selling rate for telegraphic transfers. (*b*) Selling rate for telegraphic transfers.

(iii) *Other Countries.* Exchange rates for Australia on a number of other countries are published in *Finance Bulletin* No. 38, 1946–47.

(iv) *Interstate.* Exchange rates between the several capital cities of the States at 30th June, 1947 were as follows :—

INTERSTATE EXCHANGE RATES, 30th JUNE, 1947.

Between—	And—					
	New South Wales.	Victoria.	Brisbane and adjacent towns.	South Australia.	Perth and all but distant towns.	Tasmania.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Sydney and New South Wales towns ..	..	2 6	2 6	5 0	7 6	5 0
Melbourne and Victorian towns ..	2 6	..	5 0	2 6	5 0	2 6
Brisbane and adjacent towns ..	2 6	5 0	..	7 6	10 0	7 6
Adelaide and South Australian towns	5 0	2 6	7 6	..	2 6	5 0
Perth and all but distant towns ..	7 6	5 0	10 0	2 6	..	7 6
Hobart and Tasmanian towns ..	5 0	2 6	7 6	5 0	7 6	..

§ 2. Savings Banks.

1. **General.**—The inauguration of Savings Banks in Australia dates from 1819, when a private Savings Bank was opened in Sydney. In 1832 the legislature created "the Savings Bank of New South Wales" under the control of trustees, and shortly after its establishment the funds of the private Savings Bank were transferred to the new institution. In the other States provision for placing deposits with Savings Banks dates from 1841 in Victoria ; 1854 in Queensland ; 1840 in South Australia ; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later) ; 1835 in Launceston ; and 1845 in Hobart. These early banks functioned as Trustee Savings Banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, Government Savings Banks.

Post Office Savings Banks were established in all States from 1864 onwards. These were separate Government institutions except in South Australia, where the Post Office acted as agent for the Savings Bank. Since the federation of the Australian States in 1900, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

Savings banks at present operating are the Commonwealth Savings Bank (all States and Territories); State Savings Bank of Victoria; Savings Bank of South Australia; and the two Trustee Banks—Hobart and Launceston.

2. **The Commonwealth Savings Bank.**—The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912; in Queensland on 16th September, 1912; in the Northern Territory on 21st October, 1912; and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank in January, 1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a separate institution known as the "Commonwealth Savings Bank". It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The Commonwealth Bank Act 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the Savings Bank. This Commission was never appointed and the Commonwealth Bank Act 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank.

3. **Amalgamations.**—Particulars relating to the absorption by the Commonwealth Savings Bank of the Government Savings Banks of New South Wales, and the State Savings Bank of Western Australia are given in Official Year Book No. 29.

4. **Extension of Facilities.**—The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted; nevertheless the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

5. **Classification of Depositors' Balances.**—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but information supplied to the Royal Commission on Monetary and Banking Systems for all savings banks except the Hobart Trustee Savings Bank shows that at 30th June, 1936 the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939, 1945, 1946 and 1947, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

At 30th June—	£100 and Under.	£101–£300.	£301–£500.	£501–£1,000.	Over £1,000.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1936	19.54	26.13	17.84	27.42	9.07
1939	20.27	27.15	17.90	26.14	8.54
1945	13.61	28.78	21.22	27.80	8.59
1946	11.77	25.84	21.46	30.71	10.22
1947	11.51	23.40	20.53	32.45	12.11

6. **Number of Accounts.**—At 30th June, 1947, the number of savings bank accounts in existence were as follows:—Commonwealth Savings Bank—operative, 3,665,193; inoperative, 1,662,744; State and Trustee Savings Banks—operative, 1,928,241; inoperative, 692,992. Generally, inoperative accounts are those with balances of less

than £1 which have not been operated on for a period of two years. It should be noted that the figures above relate to the number of accounts and not necessarily to the number of depositors.

7. **Rates of Interest on Deposits.**—The following tables show the rates of interest allowed at 30th June, 1938 to 1947 by State and trustee savings banks and by the Commonwealth Savings Bank. From 14th March, 1942 the rates of interest paid by savings banks on deposits have been subject to National Security (Economic Organization) Regulations.

STATE AND TRUSTEE SAVINGS BANKS : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

Savings Bank—	State Savings Bank of Victoria.			Savings Bank of South Australia.(b)			The Hobart Savings Bank.		The Launceston Bank for Savings.	
Interest-bearing Limit—	£1,000.			£1,000.			£300.		£300.	
Part of balance—	£1 to £500.	£501 to £1,000.	Deposit Stock.	£1 to £200.	£201 to £500.	£501 to £1,000.	£1 to £300.	Deposits fixed for twelve months.	£1 to £300.	Deposits fixed for twelve months.
	%	%	%	%	%	%	%	%	%	%
1938	2	2	2½	2¾	2¾	2½	3	3¼	3	3¼
1939	2	2	2½	3	2¾	2½	3	3¼	3	3¼
1940	2	2	2½	2¾	2½	2¼	3	3¼	3	3¼
1941	2	2	2½	2½	2½	2¼	2¾	3¼	2¾	3¼
1942	2	1½	1¾	2¼	2¼	1¾	2¼	2¼	2¼	2¼
1943	2	1½	1¾	2¼	2¼	1¾	2¼	2¼	2¼	2¼
1944	2	1½	1½	2¼	2¼	1¾	2¼	2¼	2¼	2¼
1945	2	1¼	1¼	2¼	2¼	1½	2¼	2¼	2¼	2¼
1946	2	1	1	2¼	2¼	1¼	2¼	2¼	2¼	2¼
1947	2	1	1	2¼	2¼	1¼	2¼	2¼	2¼	2¼

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1947 were—State Savings Bank of Victoria, 2 per cent. on first £2,000, 1 per cent. on balance; Savings Bank of South Australia, 2¼ per cent. on first £500, 2 per cent. on next £1,500 and 1 per cent. on the balance. (b) Interest on deposits in accounts closed during the year is generally allotted at a lower rate than that applicable to accounts remaining open.

COMMONWEALTH SAVINGS BANK : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

Part of balance—	£1 to £500.	£501 to £1,300.(b)	Part of balance—	£1 to £500.	£501 to £1,300.(b)
	%	%		%	%
1938	2	1¾	1943	2	1½
1939	2	1¾	1944	2	1½
1940	2	1¾	1945	2	1¼
1941	2	1¾	1946	2	1
1942	2	1½	1947	2	1

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1947 were 2 per cent. on first £2,000 and 1 per cent. on the balance. (b) Up to 1941 the interest-bearing limit in all States except Queensland was £1,300. In Queensland it was £2,000. The limit since 1942 has been £1,000 in all States.

Rates of interest on deposits were fixed under National Security Regulations from 7th April, 1942 in relation to the Savings Bank of South Australia, and from 1st April, 1942 in relation to every other savings bank. For the Commonwealth Savings Bank and the State Savings Bank of Victoria maximum rates were fixed at 2 per cent. on the first £500 and 1½ per cent. on any further balance up to £1,000. On balances in excess of £1,000 no interest was to be paid, except in respect of Friendly Societies and similar bodies where it had been the custom to pay interest on the full balance. The rate of 2 per cent. was allowed in these cases. However, by arrangement between the banks, maximum rates were not paid on balances in excess of £2,000 in these accounts. Maximum rates for other savings banks were fixed at one-quarter per cent. higher than those for the Commonwealth Savings Bank and the State Savings Bank of Victoria.

8. **Statistical Returns.**—Commencing with July, 1931, monthly returns have been furnished by savings bank authorities. The information given in the following paragraphs relates to the deposits at 30th June in each year. For convenience of reference the information has been grouped under the following headings :—

(i) All Savings Banks ; (ii) Commonwealth Savings Banks ; and (iii) State Savings Banks (including Trustee Banks in Tasmania).

9. **All Savings Banks.**—(i) *Particulars for Year* 1946–47. The following statement gives details of the business transacted by all savings banks for the year 1946–47 :—

ALL SAVINGS BANKS : PARTICULARS, 1946–47.

State or Territory.	Amount on Deposit at 30th June, 1946.	Excess of Deposits over Withdrawals during year.	Interest Added during year.	Amount on Deposit at 30th June 1947.
	£'000.	£'000.	£'000.	£'000.
New South Wales	236,242	— 8,716	3,842	231,368
Victoria	211,326	1,123	3,658	216,107
Queensland	90,063	— 5,891	1,430	85,602
South Australia	65,865	731	1,304	67,900
Western Australia	38,289	— 2,285	621	36,625
Tasmania	20,447	18	391	20,856
Northern Territory ..	349	181	7	537
Australian Capital Territory ..	973	31	16	1,020
Total	663,554	— 14,808	11,269	660,015

NOTE.—Minus sign (—) indicates excess of withdrawals over deposits.

(ii) *Deposits.* (*a*) 30*th June*, 1939 *and* 1944 *to* 1947. The following table shows for all savings banks the amount at credit of depositors and the average deposits per head of population at 30th June, 1939 and 1944 to 1947 :—

ALL SAVINGS BANKS : DEPOSITS.

TOTAL.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1939	87,474	80,461	29,045	27,397	12,396	8,396	99	319	245,587
1944	(*a*)162,867	153,887	65,479	(*b*) 48,592	25,791	14,213	(*c*)	701	471,530
1945	198,203	182,149	80,094	(*b*) 56,995	31,763	16,914	(*c*)	846	566,964
1946	236,242	211,326	90,063	65,865	38,289	20,447	349	973	663,554
1947	231,368	216,107	85,602	67,900	36,625	20,856	537	1,020	660,015

PER HEAD OF POPULATION.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1939	31 16 11	42 15 4	28 11 6	45 19 9	26 12 8	35 9 7	15 19 4	26 9 0	35 5 7
1944	*a*56 16 2	77 3 0	61 10 9	*b*78 3 11	53 4 6	58 0 6	(*c*)	48 16 10	64 12 7
1945	68 7 8	90 10 5	74 4 6	*b*90 11 11	64 16 6	68 4 11	(*c*)	57 14 11	76 17 2
1946	80 15 6	104 1 1	82 10 8	103 9 9	77 19 11	81 8 11	66 10 2	64 18 7	89 1 8
1947	77 10 0	105 2 11	77 7 7	105 1 5	72 17 1	81 2 4	49 8 1	60 7 6	87 1 3

(*a*) Includes deposits transferred from Papua and the Territory of New Guinea branches. (*b*) Includes deposits transferred from Northern Territory. (*c*) Included with South Australia.

During the depression deposits remained about the low level of £193,000,000 until June, 1932, when, with the amount at £197,966,000, there began a steady upward trend, which continued, with minor regressions only, until February, 1940, when deposits amounted to £246,503,000. Two war loans and the war savings certificate scheme were launched during the next five months. These were instrumental in reducing the level of deposits to £236,562,000 in July, 1940. From then until August, 1946, there was a regular monthly increase broken occasionally by temporary declines coinciding with loan raisings. There was a fall of £16,600,000 between August, 1946 and May, 1947 but with interest additions in June, deposits again rose to over £660,000,000.

(b) *Deposits per head and Purchasing Power.* Particulars of the deposits per head of population, actual and adjusted to purchasing power by the application of retail price index-numbers, at 30th June in each year from 1938 to 1947, are given in the following table. In calculating the index-numbers in this table the average of deposits per head of population at 30th June, 1937, 1938 and 1939 has been used as a base and made equal to 1,000.

ALL SAVINGS BANKS: DEPOSITS PER HEAD OF POPULATION.

At 30th June—	Actual.		Adjusted to Purchasing Power.(a)	
	Deposits per head of population.	Index-Number.	Deposits per head of population.	Index-Number.
	£	1937–1939 = 1000	£	1937–1939 = 1000
1938	34.87	1007	34.84	1005
1939	35.28	1018	34.35	991
1940	33.70	973	31.55	911
1941	35.52	1025	31.71	915
1942	38.25	1104	31.59	912
1943	49.52	1430	38.69	1117
1944	64.63	1866	51.29	1480
1945	76.85	2219	60.99	1760
1946	89.09	2572	69.49	2005
1947	87.06	2513	66.21	1911

(a) On the basis of the All Items ("C") Series of Retail Price Index-numbers (6 capitals) for June quarter in each year. (Base: average of June quarters, 1937, 1938 and 1939 = 1,000.)

In interpreting the above figures it should be remembered that savings bank accounts are used to some extent by institutions and business people, as well as by individuals for the investment of personal savings. The relative extent to which savings bank accounts are used for business purposes, etc., may, and probably does fluctuate considerably from time to time.

10. **War Savings and Savings Certificates.**—The War Savings Certificate Scheme was inaugurated on 18th March, 1940. Certificates were sold in denominations of £1, £5, £10 and £50, at prices of 16s., £4, £8, and £40 respectively. The date of full maturity was seven years after that of issue, but certificates could be cashed at any time, the amounts ranging, in the case of the £1 certificate, from 16s. 6d. at the end of the first year and before the end of two years to £1 at the end of seven years. Coinciding with the maturity of the first certificates issued, the original seven years series was replaced by a new five years series of savings certificates on 1st March, 1947. These certificates have a currency of five years and are issued at par in denominations of £1, £5, £10 and £50. They may be redeemed at any time with interest. At the end of five years the redemption values are £1 3s., £5 15s., £11 10s. and £57 10s. respectively.

The total amount contributed, less amounts repaid, at 30th June of each of the years 1940 to 1947 was £6,100,000, £17,380,000, £26,171,000, £35,146,000, £43,721,000, £52,534,000, £54,677,000 and £59,526,000.

11. **Commonwealth Savings Bank.**—(i) *Particulars for Year* 1946–47. Particulars for the States and Territories for the year 1946–47 are shown in the table below :—

COMMONWEALTH SAVINGS BANK : PARTICULARS, 1946–47.

State or Territory.	Amount on Deposit at 30th June, 1946.	Excess of Deposits over Withdrawals during year.	Interest Added during year.	Amount on Deposit at 30th June, 1947.
	£'000.	£'000.	£'000.	£'000.
New South Wales	236,242	— 8,716	3,842	231,368
Victoria	47,603	— 415	771	47,959
Queensland	90,063	— 5,891	1,430	85,602
South Australia	12,665	13	214	12,892
Western Australia	38,289	— 2,285	621	36,625
Tasmania	7,851	— 38	134	7,947
Northern Territory ..	349	181	7	537
Australian Capital Territory..	973	31	16	1,020
Total	434,035	— 17,120	7,035	423,950

(ii) *Deposits*—30*th June*, 1939 *and* 1944 to 1947. The amount on deposit with the Commonwealth Savings Bank in each State, in the Territories of Papua and New Guinea, and in London at 30th June in each of the years 1939 and 1944 to 1947 was as follows :—

COMMONWEALTH SAVINGS BANK : DEPOSITS, 30th JUNE.

Place of Deposit.	1939.	1944.	1945.	1946.	1947.
	£'000.	£'000.	£'000.	£'000.	£'000.
New South Wales..	87,474	162,867	198,203	236,242	231,368
Victoria	11,242	31,205	38,933	47,603	47,959
Queensland	29,045	65,479	80,094	90,063	85,602
South Australia	3,167	8,474	10,505	12,665	12,892
Western Australia	12,396	25,791	31,763	38,289	36,625
Tasmania	2,358	4,814	6,006	7,851	7,947
Northern Territory	99	(*a*)	(*a*)	349	537
Australian Capital Territory ..	319	701	846	973	1,020
Total	146,100	299,331	366,350	434,035	423,950
Papua and New Guinea (*c*) ..	209	(*b*)	86	303	750
London (*c*)	571	500	573	661	750
Grand Total	146,880	299,831	367,009	434,999	425,450

(*a*) Included with South Australia. (*b*) Included with New South Wales. (*c*) Not included in the figures given in paras. 9 (i) and (ii) and 11 (i)

(iii) *Balance-sheet*, 30*th June*, 1946 *and* 1947. Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1946 and 1947 were as follows :—

COMMONWEALTH SAVINGS BANK(*a*) : BALANCE-SHEET, 30th JUNE.

Liabilities.	1946.	1947.	Assets.	1946.	1947.
	£'000.	£'000.		£'000.	£'000.
Reserve Fund ..	4,560	5,001	Cash Balances and Money at Short Call	42,768	38,748
Depositors' Balances and Accrued Interest	435,641	426,067	Australian Notes and Coin	496	476
Contingency Account and other Liabilities	11,683	12,803	Government Securities	373,043	369,488
			Securities of Municipal and Other Public Authorities ..	30,707	30,574
			Bank Premises ..	661	637
			Other Assets ..	4,209	3,948
Total ..	451,884	443,871	Total ..	451,884	443,871

(*a*) Includes London and Territories of Papua and New Guinea branches.

(iv) *Profits.* Under the terms of the Savings Bank Amalgamation Agreements the profits of the Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. Net profits for the last 10 years and the distribution of those profits are shown in the following table :—

COMMONWEALTH SAVINGS BANK : DISTRIBUTION OF PROFITS.

Year ended 30th June—	Total Profit.	Payments to State Authorities under Savings Bank Amalgamation Agreements.					Published Profit.	Distribution of Published Profit.	
		New South Wales. (a)	Queensland. (b)	Western Australia. (b)	Tasmania. (b)	Total.		National Debt Sinking Fund.	Savings Bank Reserve Fund.
	£	£	£	£	£	£	£	£	£
1938 ..	488,477	156,665	25,921	10,484	3,825	196,895	291,552	145,776	145,776
1939 ..	532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1940 ..	632,531	195,549	41,466	18,495	4,079	259,589	372,942	186,471	186,471
1941 ..	644,812	192,110	43,579	17,060	4,611	257,360	387,452	193,726	193,726
1942 ..	609,286	178,978	41,215	16,351	3,988	240,532	368,754	184,377	184,377
1943 ..	653,341	189,091	48,198	19,479	3,973	260,741	392,600	196,300	196,300
1944 ..	848,934	226,020	86,226	32,498	5,408	350,152	498,782	249,391	249,391
1945 ..	1,403,029	383,675	152,373	54,486	10,321	600,855	802,174	401,087	401,087
1946 ..	1,511,858	395,379	174,485	59,997	11,089	640,950	870,908	435,454	435,454
1947 ..	1,526,566	397,385	175,229	61,215	12,043	645,872	880,694	440,347	440,347

(*a*) Paid to Rural Bank of New South Wales. (*b*) Paid to State Consolidated Revenue Funds.

12. **State Savings Banks.**—(i) *Particulars for* 1946–47. Particulars of the transactions of all State savings banks for the year 1946–47 are given hereunder. Throughout the following tables the figures for Tasmania refer to the Trustee Savings Banks in Hobart and Launceston. Although the accounts of these institutions are made up for half-yearly periods ending 28th February and 31st August, the managements have furnished particulars of deposits as at 30th June.

STATE SAVINGS BANKS : PARTICULARS, 1946–47.

State.	Amount on Deposit at 30th June, 1946.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1947.
	£'000.	£'000.	£'000.	£'000.
Victoria	163,723	1,538	2,887	168,148
South Australia	53,200	718	1,090	55,008
Tasmania	12,596	56	257	12,909
Total	229,519	2,312	4,234	236,065

NOTE.—The State savings banks in New South Wales, Queensland, Western Australia and Tasmania were absorbed by the Commonwealth Savings Bank.

(ii) *Deposits—30th June,* 1939 *and* 1944 *to* 1947. The following statement shows the amount on deposit with State savings banks at 30th June in each of the years 1939 and 1944 to 1947 :—

STATE SAVINGS BANKS : DEPOSITS AT 30th JUNE.

State.	1939.	1944.	1945.	1946.	1947.
	£'000.	£'000.	£'000.	£'000.	£'000.
Victoria	69,219	122,682	143,216	163,723	168,148
South Australia ..	24,230	40,118	46,490	53,200	55,008
Tasmania	6,038	9,399	10,908	12,596	12,909
Total	99,487	172,199	200,614	229,519	236,065

(iii) *Assets, 30th June,* 1947. At 30th June, 1947 the assets of all State savings banks amounted to £251,525,208, distributed as shown hereunder :—

STATE SAVINGS BANKS : ASSETS, 30th JUNE, 1947.

Particulars.	Victoria.	South Australia.	Tasmania. (*a*)	Total
	£	£	£	£
Cash in hand, in transit and on Current Account	7,882,792	763,743	952,213	9,598,748
Fixed Deposits	34,972,000	9,449,000	1,695,000	46,116,000
Outstanding Interest, Dividends and Rents	1,071,192	367,433	129,991	1,568,616
Government Securities	114,696,464	41,169,054	7,682,076	163,547,594
Municipal and Other Public Securities	17,955,790	1,293,126	2,054,633	21,303,549
Mortgages	1,239,075	5,510,589	1,443,828	8,193,492
Landed and House Property ..	755,404	400,560	22,859	1,178,823
All other Assets	7,048	3,609	7,729	18,386
Total Assets	178,579,765	58,957,114	13,988,329	251,525,208

(*a*) At 31st August, 1947. See par. 12 (1).

At 30th June, 1946 the assets of the State savings banks amounted to £244,137,000, of which £156,514,000 was in Government securities, £17,850,000 in municipal and other public securities and £49,722,000 in fixed deposits. State totals were Victoria, £173,671,000 ; South Australia, £56,864,000 ; and Tasmania, £13,602,000.

(iv) *Profit and Loss Accounts,* 1946–47. Details of the profit and loss accounts of the several State savings banks for the year 1946–47 are given below :—

STATE SAVINGS BANKS : PROFIT AND LOSS ACCOUNTS, 1946–47.

Particulars.	Victoria.	South Australia.	Tasmania. (*a*)	Total.
	£	£	£	£
Receipts—				
Total—Interest, Dividends, Rents, and all other ..	4,241,100	1,680,270	421,122	6,342,492
Expenditure—				
Interest alloted to Depositors ..	2,644,385	1,020,143	264,234	3,928,762
Provision for accrued interest on Depositors' Balances ..	251,523	75,000	..	326,523
Expenses of Management ..	901,621	304,698	70,688	1,277,007
All other Expenditure ..	135,354	25,450	14,700	175,504
Total	3,932,883	1,425,291	349,622	5,707,796
Profit or loss for year	308,217	254,979	71,500	634,696
Balance of profit and loss account brought forward	152,807	133,081	104,650	390,538
Total	461,024	388,060	176,150	1,025,234
Distribution of Profits—				
Amount written off Bank Premises	..	(*b*)	2,353	2,353
Amount carried to Reserves and Depreciation Funds ..	300,000	255,341	69,000	624,341
Balance of Profit and Loss Account carried forward ..	161,024	132,719	104,797	398,540

(*a*) Year ended 31st August, 1947. *See* par. 12(i). (*b*) Bank premises written off from reserve fund.

In 1945–46 total receipts were £5,903,000 and expenditure, £5,257,000. Net profits amounted to £646,000.

C. COMPANIES.

NOTE.—Statistics available in regard to registered companies relate to (*a*) Trustees, Executors and Agency Companies ; (*b*) Registered Building and Investment Societies ; and (*c*) Registered Co-operative Societies.

§ 1. Trustees, Executors and Agency Companies.

The following table shows, for the years 1939 and 1944 to 1946, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Figures for the year 1939 have been obtained from returns supplied to the Commonwealth Bureau of Census and Statistics, while those for the years 1944 to 1946 have been extracted from a summary of the last published balance-sheets as shown in the *Australasian Insurance and Banking Record*. Individual items are therefore not entirely comparable. Details of assets of trust funds administered are shown for the year 1939, but for the years 1944 to 1947 totals for nine only of the 23 offices are available.

TRUSTEES, EXECUTORS AND AGENCY COMPANIES, AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.
Number of Companies	20	23	23	23
Liabilities—	£	£	£	£
Capital paid-up	1,312,202	1,408,452	1,408,452	1,408,452
Reserves and undistributed Profits ..	1,235,750	1,327,604	1,331,200	1,344,572
Other Liabilities	150,960	618,991	714,707	825,455
Total Liabilities	2,698,912	3,355,047	3,454,359	3,578,479
Assets—				
Government and Municipal Securities	730,935	*a*1,060,194	*a*1,092,487	*a*1,060,516
Loans on Mortgage	397,944	493,838	488,576	513,044
Other Loans and Advances ..	75,141	(*b*)	(*b*)	(*b*)
Real Property	1,148,566	1,080,768	1,080,556	1,075,552
Deposits in Banks	147,717	(*c*)155,957	(*c*)238,395	(*c*)326,148
Other Assets	198,609	564,290	554,345	603,219
Total Assets	2,698,912	3,355,047	3,454,359	3,578,479
Assets of Trust Funds Administered—(*d*)	£'000.	£'000.	£'000.	£'000.
Australian Government and Municipal Securities	68,515	Not available		
British and Foreign Government and Municipal Securities	1,342			
Loans on Mortgage	30,977			
Other Loans and Advances ..	2,713			
Shares in Companies	59,351			
Real Property	51,732			
Deposits in Banks	8,958			
Other Assets	13,409			
Total Trust Fund Assets ..	236,997	(*e*)171,683	(*e*)175,216	(*e*)179,035

(*a*) Includes fixed deposits and deposits with Government. (*b*) Included with other assets. (*c*) Cash. (*d*) Includes particulars of trust funds administered by Public Trustees in 1939 only. (*e*) Nine offices only.

§ 2. Registered Building and Investment Societies.

1. **Summary.**—During 1945 returns were received from 398 societies, but the information is not exhaustive, as particulars regarding unimportant organizations are not included. In the following table general information relating to the societies for the year 1945 is given.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : SUMMARY.

Particulars.	N.S.W. 1944–45.	Vic. 1945.	Q'land. 1944–45.	S. Aust. 1945.	W.Aust. 1944–45.	Tas. 1944–45.	Total.
Societies making returns—							
Permanent .. No.	16	22	7	6	6	4	61
Terminating .. No.	316	2	4	12	3	..	337
Total	332	24	11	18	9	4	398
Number of shareholders ..	(a) 55,283	11,581	15,271	16,894	18,386	5,578	122,993
,, shares	(b)674,505	856,974	2,070,191	62,306	(c)	46,621	3,710,597
,, borrowers ..	(d) 25,305	12,761	6,714	2,647	3,354	1,546	52,327
Income for year from interest, etc. .. .. £	161,909	382,596	108,849	36,072	97,218	44,383	831,027
Working expenses for year £	148,301	242,243	165,736	11,629	16,268	8,139	592,316
Amounts of deposits during year .. .. £	343,235	349,412	14,436	30,732	304,563	3,071	1,045,449
Repayments of loans during year .. .. £	(e) 538,228	1,208,213	506,919	169,234	337,191	120,881	2,880,666
Loans granted during year £	e1,056,256	686,770	420,002	178,709	133,720	84,901	2,560,358

(a) Includes 26,449 shareholders in Star Bowkett and 23,923 in other terminating societies. (b) Includes 302,367 shares in Star Bowkett and 326,828 in other terminating societies and excludes two investment societies. (c) Not available. (d) Permanent societies only. (e) Incomplete—other terminating societies not available.

2. **Liabilities and Assets.**—Particulars of liabilities and assets in 1945 of the 398 societies mentioned in the previous paragraph are shown below.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : LIABILITIES.

State.	Paid-up Capital or Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities
	£	£	£	£	£
New South Wales ..	5,243,934	911,773	716,693	a10,198,482	17,070,882
Victoria	2,456,652	1,121,911	2,601,988	287,605	6,468,156
Queensland.. ..	2,069,022	75,529	9,809	101,684	2,256,044
South Australia ..	922,480	148,279	128,711	13,320	1,212,790
Western Australia ..	1,124,144	49,856	63,695	75,886	1,313,581
Tasmania	507,311	127,367	219,664	15,271	869,613
Total ..	12,323,543	2,434,715	3,740,560	10,692,248	29,191,066

(a) Includes £9,341,376 for other terminating societies.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : ASSETS.

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in Hand and on Deposit and other Assets.	Total Assets.
	£	£	£	£
New South Wales	a15,675,090	(b)	1,395,792	17,070,882
Victoria	4,933,302	153,660	(c)1,381,194	6,468,156
Queensland	1,813,396	18,422	424,226	2,256,044
South Australia	895,925	47,986	268,879	1,212,790
Western Australia	1,049,278	16,697	(d) 247,606	1,313,581
Tasmania	533,307	9,450	326,856	869,613
Total	24,900,298	246,215	4,044,553	29,191,066

(a) Includes £13,029,632 for other terminating societies. (b) Not available. (c) Includes Investments, Government Loans (including accrued interest), £1,228,611. (d) Includes Government Securities, £77,060.

§ 3. Co-operative Societies.

1. **General.**—Returns relating to co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act 1923–1945. A summary of the business of co-operative societies for the year 1945 for all States except Western Australia is given in the following table. For Western Australia details of the business during 1940–41 (the lastest year available) is given.

CO-OPERATIVE SOCIETIES : SUMMARY.

Particulars.		N.S.W. 1944–45. (a)	Vic. 1944–45.	Q'land. 1944–45.	S. Aust. 1945.	W. Aust. 1940–41.	Tas. 1944 45
PRODUCERS' SOCIETIES.							
Number of Societies ..	..	146	50	122	37	37	10
,, Branches ..	..	(b)	20	67	11	24	17
,, Members	..	62,572	40,935	70,444	6,534	13,073	9,396
Gross Turnover (Sales)	£	22,591,614	4,638,099	16,853,803	1,743,218	1.752,805	1,016,038
Other Income ..	£	133,625	262,869	493,373	98,772	664,919	35,597
Total Income ..	£	22,725,239	4,900,968	17,347,176	1,841,990	2,417,724	1,051,635
Total Purchases during Year	£	18,474,986	3,829,209	15,093,244	1,219,174	1,570,626	684,902
Other Expenditure ..	£	4,289,000	978,357	2,853,737	488,403	720,602	336,146
Total Expenditure ..	£	22,763,986	4,807.566	17,946,981	1,707,577	2,291,228	1,021,048
Rebates and Bonuses	£	..	7,890	92,924	35,708	2,363	7,030
Dividends on Share Capital	£	44,619	19,653	52,344	12,498	13.114	4.710
CONSUMERS' SOCIETIES.							
Number of Societies ..	..	44	20	14	8	5	2
,, Branches ..	..	(b)	9	10	44	..	3
,, Members	..	55,057	11,183	6,893	56,810	2,715	426
Gross Turnover (Sales)	£	3,467,870	773,765	520,298	1,516,641	171,758	63,951
Other Income ..	£	26,971	19,322	5,050	34,216	3,587	98
Total Income ..	£	3,494,841	793,087	525,348	1,550,857	175,345	64,049
Total Purchases during Year	£	2,697,353	631,354	468,120	1,155,886	140,944	52,513
Other Expenditure ..	£	539,327	111,175	49,950	269,856	32,307	10,515
Total Expenditure ..	£	3,236,680	742,529	518,070	1,425,742	173,251	63,028
Rebates and Bonuses	£	213,863	35,456	9,101	112,445	862	..
Dividends on Share Capital	£	51,112	6,204	1,607	22,186	1,583	954
SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'.							
Number of Societies ..	..	..	8	4	10	43	..
,, Branches ..	..	..	5	8	1	12	..
,, Members	..	..	3,683	4,788	1,580	5,875	..
Gross Turnover (Sales)	£	..	1,404,549	1,408,001	385,212	624,213	..
Other Income ..	£	..	12,392	12,767	178,842	29,943	..
Total Income ..	£	..	1,416,941	1,420,768	564,054	654,156	.
Total Purchases during Year	£	..	1,230,917	1,246,245	471,841	542,849	..
Other Expenditure ..	£	..	169.335	201.800	110,784	97,832	..
Total Expenditure ..	£	..	1,400,252	1,448,045	582,625	640,681	..
Rebates and Bonuses	£	..	6,672	4,420	37,935	12,247	..
Dividends on Share Capital	£	..	3,264	2,100	1,526	4,400	..

(a) Particulars relate to societies registered under Co-operation Act 1923–1945. Particulars shown under Producers' Societies refer to Rural Societies, and under Consumers' to Trading Societies.
(b) Not available.

2. **Liabilities and Assets.**—The next table gives the liabilities and assets for the same years for which information is available :—

CO-OPERATIVE SOCIETIES : LIABILITIES AND ASSETS.

Particulars.	N.S.W. 1944–45. (*a*)	Vic. 1944–45.	Q'land. 1944–45.	S. Aust. 1945.	W. Aust. 1940–41.	Tas. 1944–45.
PRODUCERS' SOCIETIES.						
Liabilities—	£	£	£	£	£	£
Paid-up Capital	1,221,073	1,007,090	1,728,019	285,305	272,932	118,959
Loan Capital	(*b*)	108,170	640,219	211,773	210,260	32,432
Bank Overdrafts	1,725,169	551,845	895,589	38,058	24,777	135,976
Accumulated Profits	1,401,533	183,111	273,981	66,882	6,906	41,325
Reserve Funds		370,528	2,241,371	358,551	208,812	37,652
Sundry Creditors	2,423,169	609,610	3,145,307	113,203	302,753	81,078
Other Liabilities		106,391	149,734	453,577	455,490	17,566
Total Liabilities	6,770,944	2,936,745	9,074,220	1,527,349	1,481,930	464,988
Assets—						
Land and Buildings	2,565,383	1,322,051	1,691,037	224,253	420,964	130,933
Machinery, Plant and other fixed Assets			2,887,796	348,425	216,520	52,200
Stocks	1,236,769	495,427	1,229,647	526,208	162,952	146,249
Sundry Debtors	1,710,553	796,398	2,358,236	181,004	369,605	119,795
Cash in hand and on deposit	262,868	111,323	628,031	101,053	165,945	7,418
Profit and Loss Account	995,371	12,189	19,379	186	44,723	1,028
Other Assets		199,357	260,094	146,220	101,221	7,365
Total Assets	6,770,944	2,936,745	9,074,220	1,527,349	1,481,930	464,988
CONSUMERS' SOCIETIES.						
Liabilities—	£	£	£	£	£	£
Paid-up Capital	907,957	174,688	56,877	626,799	37,425	17,111
Loan Capital	(*b*)	34,745	7,275	99,531	..	800
Bank Overdrafts	17,552	10,840	8,100	1,409	4,008	6,058
Accumulated Profits	569,937	50,569	12,926	67,445	4,019	2,629
Reserve Funds		104,865	39,724	207,008	5,035	7,102
Sundry Creditors	366,806	45,536	39,351	52,334	15,096	3,932
Other Liabilities		10,219	1,869	8,402	471	3,035
Total Liabilities	1,862,252	431,462	166,122	1,062,928	66,054	40,667
Assets—						
Land and Buildings	531,305	129,140	25,437	285,519	10,002	13,718
Machinery, Plant and other fixed Assets			8,054	38,239	6,795	2,601
Stocks	482,150	115,100	68,694	398,405	27,555	17,376
Sundry Debtors	200,984	60,751	40,900	42,937	10,231	4,651
Cash in hand and on deposit	122,693	73,693	17,774	80,314	7,487	331
Profit and Loss Account	525,120	7,214	493	..	1,244	..
Other Assets		45,564	4,770	217,514	2,740	1,990
Total Assets	1,862,252	431,462	166,122	1,062,928	66,054	40,667
SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'						
Liabilities—	£	£	£	£	£	£
Paid-up Capital	..	63,669	88,838	71,834	158,787	..
Loan Capital	..	8,201	1,917	38,389	14,749	..
Bank Overdrafts	..	34,785	55,178	83,502	32,603	..
Accumulated Profits	..	52,450	4,828	523	11,889	..
Reserve Funds	..	87,804	52,399	154,936	108,408	..
Sundry Creditors	..	100,571	167,931	64,508	56,684	..
Other Liabilities	..	7,011	1,795	160,772	1,410	..
Total Liabilities	..	354,491	372,886	574,464	384,530	..
Assets—						
Land and Buildings	..	174,894	81,254	91,465	79,313	..
Machinery, Plant and other fixed Assets	..		82,863	69,444	23,828	..
Stocks	..	72,325	87,745	181,504	160,930	..
Sundry Debtors	..	55,466	89,096	40,304	88,772	..
Cash in hand and on deposit	..	9,149	1,478	52,232	17,951	..
Profit and Loss Account	..	..	255	..	4,058	..
Other Assets	..	42,657	30,195	139,515	9,678	..
Total Assets	..	354,491	372,886	574,464	384,530	..

(*a*) Particulars relate to societies registered under Co-operation Act 1923–1945. Particulars shown under Producers' Societies refer to Rural Societies and under Consumers' to Trading Societies.
(*b*) Not available.

D. INSURANCE.

§ 1. Insurance—General.

1. **Legislation.**—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate in regard to "insurance other than State insurance; also State insurance extending beyond the limits of the State concerned". Legislation by the Commonwealth Parliament includes the Life Assurance Companies Act 1905 limiting the amount of assurance payable on the death of children, the Marine Insurance Act 1909 defining the limits of marine insurance and regulating the terms of contracts, etc., the Insurance Act 1932–1937, requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945, generally regulating life insurance business in Australia. These laws have limited application, and except for life insurance business, which is regulated by the Life Insurance Act 1945, insurance business is conducted under State laws.

2. **Insurance Act 1932-1937.**—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to deposit money or approved securities with the Commonwealth Treasurer to the extent specified in the schedule.

Money deposited is invested by the Treasurer in prescribed securities according to the selection of the depositor, and all interest accruing on deposits or securities is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

If the value of money and approved securities deposited has depreciated below the value required by the Act, the Treasurer may require the depositor to lodge additional deposits to bring the total to the prescribed value.

After this Act became law, State laws governing insurance deposits ceased to operate. Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States. Whilst deposits so remained with the State, the depositors, to the extent of the value of their deposits, were exempt from liability to make deposits under the Commonwealth Act, and the conditions of State laws continued to apply to the deposits until the Commonwealth Treasurer required their return to depositors who immediately had to make deposits with the Commonwealth Government to the prescribed extent.

The following are not regarded as insurance businesses under the Act :—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and Friendly Society, Union and Association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned and under the Life Insurance Act 1945 ceased to apply to life insurance business.

The following statement shows particulars of deposits under the Insurance Act 1932–1937 and Life Insurance Act 1945 at 30th June, 1947 :—

DEPOSITS UNDER INSURANCE ACTS, 30th JUNE, 1947.

Class of Insurance.	Deposited with Government of—		Total.
	Commonwealth.	States.	
	£	£	£
Life	1,305,775	..	1,305,775
Other	1,006,749	1,772,620	2,779,369
Total	2,312,524	1,772,620	4,085,144

The deposits comprise cash £553,045, government, municipal and other securities £2,997,239, fixed deposits £5,000, bank guarantees and undertakings £143,810, titles and mortgages £386,050.

3. **Life Insurance Act 1945.**—(i) *Objects.* In his speech on the introduction of the Bill for the Life Insurance Act 1945 the Treasurer stated that the objects of the legislation were as follows :—(*a*) To replace all State legislation on the subject of life insurance and to provide a uniform basis for applying the requirements of those Acts to the whole of Australia ; (*b*) to incorporate existing Commonwealth Acts with minor amendments ; (*c*) to appoint an Insurance Commissioner who shall exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy owners ; (*d*) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

In addition, it was proposed to provide for the establishment of a Commonwealth Government Insurance Office, if and when the establishment of such an office was thought to be in the public interest.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946.

(ii) *Provisions.* The main provisions of the Act are as follows :—(*a*) *General.* The Act provides for uniform control of life insurance business throughout Australia and in such Australian Territories as are proclaimed. The Life Assurance Companies Act 1905 is re-enacted with minor amendments, and the Insurance Act 1932–1937 ceases to apply to life insurance companies. Its main provisions are, however, continued in this Act. State Acts relating to the control of life insurance business cease to operate. State life insurance business confined to the limits of the State concerned, business in relation to benefits provided by a friendly society or trade union, any scheme or arrangement for the provision of superannuation benefits, and pensions or payments to employees or their dependants and the issue of life insurance policies to employees are excluded from the application of the Act. (*b*) *Administration.* An Insurance Commissioner appointed by the Governor-General is, subject to the directions of the Treasurer, responsible for the administration of the Act. (*c*) *Registration of Companies.* No company can carry on life insurance business unless it has been registered by the Insurance Commissioner. The Commissioner may refuse registration to any company only with the approval of the Treasurer. (*d*) *Deposits.* Companies carrying on life insurance business in Australia must lodge with the Treasurer a deposit in money or approved securities. The amount of the deposit is as follows :—Companies existing prior to the commencement of the Act—£1,000 for each £5,000 of net liability to policy owners as shown by the latest valuation report, with a maximum deposit of £50,000 : new foreign companies —£50,000 ; new Australian companies—£5,000, plus £5,000 per annum (£1,000 per annum in the case of a mutual company) up to a maximum of £50,000 or the amount to be deposited by companies existing prior to the commencement of the Act, whichever is the greater. Money deposited is to be invested by the Treasurer in securities selected by the company and all interest accruing on the deposits is to be paid to the company. The deposits are to be held by the Treasurer as security for the policy-owners and cannot be released until adequate provision has been made for the company's liabilities to Australian policy-owners. (*e*) *Statutory Funds.* A company carrying on life insurance business must establish a "statutory fund" for that business. All amounts received in respect of its life insurance business must be paid to, and form part of, the assets of that fund. The fund can only be used to meet liabilities or expenses of the life insurance business for which the fund has been established. Separate funds can be established by a company for different classes of life insurance business. (*f*) *Accounts, Balance-sheets and Audit.* Separate accounts must be kept for industrial and ordinary life insurance business. Statements of these accounts must be prepared in accordance with prescribed forms and delivered to the Commissioner. The accounts must be audited by a person approved by the Commissioner. (*g*) *Actuarial Investigation.* An actuarial investigation into the financial condition of each Statutory Fund must be made at least once in every five years. The basis of valuation must not be less than a prescribed minimum. A company cannot distribute a dividend to shareholders or a new bonus to policy-holders unless a surplus is revealed in the fund by the valuation. Not more than 20 per cent. of any surplus can be paid to shareholders. (*h*) *Documents to be furnished to the Commissioner.* Provision is made for copies of all accounts, balance-sheets, valuation reports and certain statistical information to be furnished to the Commissioner. These documents can be inspected by members of the public. (*i*) *Investigations by the Commissioner.* The Commissioner may make an investigation into the affairs of any company. Provision is made to compel the company to furnish any information required by the Commissioner for the purposes of an investigation. On completion of an investigation the Commissioner must advise the company of the result of his investigation and may issue any directions to the company which he thinks necessary to deal with the position disclosed. (*j*) *Judicial Management and Winding-up.* If investigations into a Company's business reveal a serious state of affairs, the Commissioner may apply to the High Court for an order for the company to be placed under judicial management or for an order for the winding-up of the company. If the Court orders that the company be placed under judicial management it shall appoint a judicial manager who shall manage the company in accordance with directions he receives from the Court. If the Court orders the winding-up of the company it shall appoint a liquidator, and the winding-up will be carried out in accordance with the laws of the State in which the company is incorporated. (*k*) *Issue of Policies.* The Commissioner may require a company to discontinue the use of any form of proposal, policy or other written matter describing its policy contracts if he considers it to be misleading. Premium rates charged must be approved by an actuary and a company cannot allow a rebate or commission in excess of the allowance for rebates or commission taken into account by the actuary in fixing the rates of premium. An insurable interest is defined. The effect of a mis-statement by a policy-owner in his proposal is limited. If the mis-statement relates to age, an equitable method of adjustment is provided. In other cases of mis-statement the company cannot make any adjustment to or avoid the policy unless the statement was fraudulently untrue or relates to a material fact, and is discovered within three years of the date on which it was made. (*l*) *Assignment and Mortgage of Policies.* Rules are provided for the assignment or mortgage of policies. The consent of the company liable under the policy is necessary before an industrial insurance policy can be assigned. (*m*) *Protection of Policies.* Life insurance policies are protected against the policy-owner's creditors in the case of the bankruptcy of the policy-owner. (*n*) *Paid-up Policies, Surrender Value and Non-forfeiture.* A policy-owner is, on application, entitled to a paid-up policy after paying three years' premiums, or to a surrender value in cash after the policy has been in force for six years. Rules for determining the value of a paid-up policy or surrender value of a policy are laid down. In addition, there are provisions that a policy will not lapse immediately if a premium is not paid. (*o*) *Payment of Policy Moneys.* Payments of claim moneys under policies assuring not more than £500 may be made without the production of probate or letters of administration. (*p*) *Payments on Death of Children under Ten Years of Age.* The amounts payable from all life insurance companies and friendly societies on the death of a child under the age of 10 years of age are limited. (*q*) *Children's Advancement Policies.* Unless expressly stated in the policy, a child's advancement policy shall become the property of the child on attaining the vesting age. (*r*) *Other Provisions relating to Policies.* A company is required to keep a register of policies in each State in which it does business and to register any policy issued in such register as is agreed upon between the company and the policy-owner. A special policy may be issued in place of an original policy which has been lost or destroyed. (*s*) *Industrial Insurance Business.* In addition to the other provisions of the Act which relate to industrial insurance business, special provisions are included to protect industrial policy-owners from misrepresentation by agents of the company. These provisions give the policy-owner the right to object to a policy within 28 days of receiving it and to claim a refund of premiums paid. Each industrial policy issued must contain a statement showing—(i) whether the policy is or is not a participating policy, (ii) the rights of the policy-owner to a paid-up policy or to receive the surrender value of his policy, and (iii) the conditions of forfeiture. (*t*) *Commonwealth Government Insurance Office.* Provision is made for the establishment of a Commonwealth Government Insurance Office. Policies issued by this office are to be guaranteed by the Commonwealth. (*u*) *Miscellaneous.* Within one year after the commencement of the Act all mutual companies shall make provision for a system of voting by its members by post on any contested election of directors or on any alteration of the company's constitution.

§ 2. Life Assurance.

1. **General.**—Statistical returns have been collected from life assurance institutions since 1907. The figures in the succeeding paragraphs refer to Australian business only, except where otherwise indicated.

2. **Institutions Transacting Business.**—(i) *General.* The number of institutions transacting life assurance business in Australia during 1946 was 26, including three oversea companies. Of the twenty-three Australian institutions, six are purely mutual, including one which transacts general business in respect of which share capital is used, and fifteen are public companies. Two offices are State Government institutions.

(ii) *Ordinary and Industrial Business.* Of the total institutions, thirteen transacted both ordinary and industrial business and one industrial business only. Ordinary and industrial business has, where possible, been kept separate.

3. **Australian Business.**—(i) *Ordinary.* The following table shows particulars of policies in existence at the end of the years 1939 and 1943 to 1946 inclusive :—

ORDINARY LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.

At End of Year—	Assurance and Endowment Policies.				Annuities.	
	No.	Amount.	Average per Policy.	Annual Premiums.	No.	Amount per Annum.
		£'000.	£	£'000.		£
1939	1,243,378	427,291	344	(*a*) 13,954	3,826	384,584
1943	1,432,760	499,229	348	16,497	(*b*)	(*b*)
1944	1,506,264	535,324	355	17,926	(*b*)	(*b*)
1945	1,586,662	578,435	365	19,583	(*b*)	(*b*)
1946	1,730,153	655,000	379	22,548	(*b*)	(*b*)

(*a*) Annual premium income. (*b*) Not available.

(ii) *Industrial.* Particulars of policies in existence at the end of the years 1939 and 1943 to 1946 are shown in the following table :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.

At End of Year—	Assurance and Endowment Policies.				Annuities.	
	No.	Amount.	Average per Policy.	Annual Premiums.	No.	Amount per Annum.
		£'000.	£	£'000.		£
1939	2,491,742	111,862	45	(*a*) 6,490	2	58
1943	3,025,795	142,560	47	8,423	(*b*)	(*b*)
1944	3,157,977	152,841	48	8,982	(*b*)	(*b*)
1945	3,279,086	163,459	50	9,537	(*b*)	(*b*)
1946	3,428,669	178,284	52	10,279	(*b*)	(*b*)

(*a*) Annual premium income. (*b*) Not available.

4. **Receipts and Expenditure.**—(i) *Ordinary Business.* The following table shows for the five years 1939 and 1943 to 1946 the aggregate Australian receipts in respect of ordinary business of all the institutions doing business in Australia. In the latest year, premiums—new, renewal and annuity—amounted to over 69 per cent., and interest, dividends and rent to nearly 30 per cent. of the Australian receipts.

ORDINARY LIFE ASSURANCE : AUSTRALIAN RECEIPTS.

Particulars.	1939.	1943.	1944.	1945.	1946.
	£	£	£	£	£
Premiums—New ..	1,613,219	1,274,935	1,759,887	2,148,060	2,962,100
Renewal	12,341,172	15,340,003	16,313,075	17,815,743	19,357,972
Annuity Premiums ..	183,866	216,526	248,878	275,289	458,718
Interest, dividends and rents	7,546,589	8,625,088	8,996,839	9,202,940	9,653,812
Other receipts ..	13,192	27,677	17,298	13,591	41,929
Total Receipts ..	21,698,038	25,484,229	27,335,977	29,455,623	32,474,531

In the following table details are given of Australian expenditure in respect of ordinary business for the five years 1939 and 1943 to 1946.

In 1946 claims accounted for 64 per cent. of the total expenditure; surrenders 8 per cent.; expenses of management 9 per cent.; commission 10 per cent.; and licence fees and taxes 4 per cent.

ORDINARY LIFE ASSURANCE : AUSTRALIAN EXPENDITURE.

Particulars.	1939.	1943.	1944.	1945.	1946.
	£	£	£	£	£
Claims	7,935,462	10,323,163	9,880,576	11,196,834	11,672,585
Surrenders	1,842,516	1,050,455	930,389	1,094,201	1,498,889
Annuities	219,473	247,928	246,711	234,183	247,353
Commission ..	1,007,721	874,903	1,061,555	1,242,449	1,835,653
Expenses of management	1,178,073	1,148,472	1,186,922	1,232,351	1,595,332
Licence fees and taxes	316,335	594,463	591,229	633,420	684,450
Shareholders' dividends	101,437	68,947	69,765	70,920	73,586
Cash bonuses paid to policy-holders ..	260,435	105,529	85,175	102,978	112,224
All other expenditure (*a*)	1,185,284	1,040,883	845,407	416,773	504,658
Total Expenditure	14,046,736	15,454,743	14,897,729	16,224,109	18,224,730

(*a*) Includes provision for taxation and other special purposes.

The excess of receipts over expenditure during the five years above was as follows:—1939, £7,651,302; 1943, £10,029,486; 1944, £12,438,248; 1945, £13,231,514; and 1946, £14,249,801. During the same years the proportions that expenditures bore to receipts were as follows:—1939, 65 per cent.; 1943, 61 per cent.; 1944, 54 per cent.; 1945, 55 per cent.; and 1946, 56 per cent.

(ii) *Industrial Business.* The aggregate Australian receipts in respect of industrial business for the years 1939 and 1943 to 1946 were as follows :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN RECEIPTS.

Particulars.	1939.	1943.	1944.	1945.	1946.
	£	£	£	£	£
Premiums—New and Renewal	6,490,164	8,213,501	8,715,578	9,369,928	9,879,196
Interest, dividends and rents	1,751,531	2,079,214	2,177,347	2,291,382	2,389,060
Other receipts ..	46,402	42,654	41,883	17,177	2,416
Total Receipts ..	8,288,097	10,335,369	10,934,808	11,678,487	12,270,672

Expenditure during 1946 totalled £8,364,536, of which claims amounted to 58 per cent., commission to 21 per cent., and expenses of management to 11 per cent. The aggregate Australian expenditure in respect of industrial business for the five years 1939 and 1943 to 1946 was as follows :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN EXPENDITURE.

Particulars.	1939.	1943.	1944.	1945.	1946.
	£	£	£	£	£
Claims	3,132,459	4,028,612	4,395,405	4,699,839	4,833,580
Surrenders	498,932	151,947	152,867	210,907	367,802
Annuities	33	36	36	75	60
Commission ..	1,353,938	1,436,756	1,492,195	1,581,526	1,734,246
Expenses of management	717,794	808,480	800,654	832,099	933,279
Licence fees and taxes	83,259	216,347	211,285	218,137	235,146
Shareholders' dividends	56,476	44,486	35,026	35,880	38,158
All other expenditure (*a*)	243,786	242,270	168,828	248,044	222,265
Total Expenditure	6,086,677	6,928,934	7,256,296	7,826,507	8,364,536

(*a*) Includes provision for taxation and other special purposes.

The excess of receipts over expenditure for each of the five years above was :—1939, £2,201,420 ; 1943, £3,406,435 ; 1944, £3,678,512 ; 1945, £3,851,980 ; and 1946, £3,906,136.

The proportions that expenditures bore to receipts were—1939, 73 per cent. ; 1943. 67 per cent. ; 1944, 66 per cent. ; 1945, 67 per cent. ; and 1946, 68 per cent.

5. **Liabilities and Assets.**—(i) *General.* The liabilities of the Australian institutions consist mainly of their assurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian institutions.

(ii) *Australian Liabilities and Assets.* For various reasons several institutions do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Assets and liabilities of the Liverpool and London and Globe Insurance Company Ltd. are excluded, as separate details of the Australian business are not available. Details of Australian liabilities are not available for years subsequent to 1941.

ORDINARY AND INDUSTRIAL LIFE ASSURANCE: AUSTRALIAN LIABILITIES.

Particulars.	1937.	1938.	1939.	1940.	1941.
	£'000.	£'000.	£'000.	£'000.	£'000.
Shareholders' capital, paid-up	1,601	1,568	1,569	1,569	1,499
Assurance and annuity funds	175,475	186,397	195,500	205 716	216,974
Other funds ..	4,745	4,973	5,697	6,325	6,845
Claims admitted but not paid	1,892	1,817	1,918	2,078	2,872
All other liabilities ..	1,497	1,500	1,271	1,472	1,240
Total Australian Liabilities ..	185,210	196,255	205,955	217,160	229,430

Assets for the years 1939 and 1943 to 1946 are set out in detail in the following table:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE: AUSTRALIAN ASSETS.

Particulars.	1939.	1943.	1944.	1945.	1946.
	£'000.	£'000.	£'000.	£'000.	£'000.
Government and municipal securities ..	115,712	171,292	194,539	217,921	238,335
Mortgages	61,720	63,624	57,216	51,065	48,349
Loans on companies' policies	22,445	18,899	17,514	16,471	15,965
Landed and house property ..	12,823	(*a*)	(*a*)	(*a*)	(*a*)
Life interests and reversions	234	(*a*)	(*a*)	(*a*)	(*a*)
Other investments ..	6,466	(*a*)	(*a*)	(*a*)	(*a*)
Outstanding premiums	1,087	(*a*)	(*a*)	(*a*)	(*a*)
Outstanding interest, dividends and rents	1,811	(*a*)	(*a*)	(*a*)	(*a*)
Cash	2,399	(*a*)	(*a*)	(*a*)	(*a*)
Establishment and organization accounts	1,101	1,149	1,141	1,127	975
All other assets ..	1,718	24,534	26,374	28,966	29,841
Total Australian Assets ..	227,516	279,498	296,784	315,550	333,465

(*a*) Not available separately; included with other assets.

6. **New Policies issued in Australia.**—(i) *Ordinary Business.* During 1946 (1945 in brackets), 214,921 (138,113) new policies were issued for £104,351,000 (£63,973,000). The average amount per policy was £486 (£463), as compared with an average of £365 per policy for all ordinary policies which were in existence at the end of 1945.

(ii) *Industrial Business.* New policies to the number of 358,695 (290,622) were issued during the year 1946 (1945 in brackets) for a total of £26,620,000 (£19,648,000). The average per policy was £74 (£68) as compared with the average of £50 for all industrial policies current at the end of 1945.

7. **Policies Discontinued in Australia.**—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. The number and amount of policies, excluding annuities, discontinued in the three years 1939, 1945 and 1946 and the reasons for discontinuance are given in the following table:—

ORDINARY LIFE ASSURANCE : POLICIES(*a*) DISCONTINUED IN AUSTRALIA.

Cause of Discontinuance.	1939.		1945.		1946.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£'000.		£'000.		£'000.
Death or maturity ..	22,529	5,612	31,259	8,613	30,655	8,895
Surrender	18,409	5,863	17,151	7,445	24,678	9,686
Forfeiture	39,382	13,414	11,925	4,319	18,475	7,926
Other	−128	−103	−2,608	496	−3,004	1,207
Total	80,192	24,786	57,727	20,873	70,804	27,714

(*a*) Excludes annuities.

Minus sign (−) denotes excess of transfers to Australian registers over transfers from Australian registers.

During 1946 the number of policies discontinued because of death or maturity constituted 43 per cent. of the total, because of surrender 35 per cent. and because of forfeiture 26 per. cent.

(ii) *Industrial Business.* The number of policies discontinued each year in this branch also is very large. Of the number of policies discontinued during 1946, 47 per cent. was due to death or maturity, 14 per cent. to surrender and 39 per cent. to forfeiture.

INDUSTRIAL LIFE ASSURANCE : POLICIES(*a*) DISCONTINUED IN AUSTRALIA.

Cause of Discontinuance.	1939.		1945.		1946.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£'000.		£'000.		£'000.
Death or maturity ..	73,585	2,759	95,922	4,173	98,267	4,300
Surrender	33,766	1,372	17,108	712	29,388	1,289
Forfeiture	154,328	7,976	57,689	4,165	80,486	6,164
Other	417	25	118	6	423	24
Total	262,096	12,132	170,837	9,056	208,564	11,777

(*a*) Excludes annuities.

§ 3. Fire, Marine and General Insurance.

1. **Australasian Companies.**—(i) *General.* The statistical information in this paragraph has been extracted from the *Australasian Insurance and Banking Record.* The following tables show particulars of revenue and expenditure, assets and liabilities, and investments of certain insurance companies having their head offices either in Australia, New Zealand or Fiji.

(ii) *Revenue and Expenditure.* The most important items of revenue and expenditure for the years 1938–39 and 1942–43 to 1945–46 are given below.

FIRE, MARINE AND GENERAL INSURANCE COMPANIES: SUMMARY OF REVENUE AND EXPENDITURE.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46
No. of companies ..	40	42	42	42	43
	£	£	£	£	£
Premiums, less reinsurances	9,707,920	12,235,918	12,575,956	12,337,015	13,246,329
Losses	5,417,153	5,976,403	6,282,965	6,152,732	7,031,373
Expenses, commission and taxes	2,994,069	4,131,429	4,499,673	4,525,648	4,632,787
Trade surplus	1,296,698	2,128,086	1,793,318	1,658,635	1,582,169
Interest, rent, etc. ..	1,011,208	919,485	913,524	996,263	1,107,823
Total surplus	2,307,906	3,047,571	2,706,842	2,654,898	2,689,992
Dividends and bonuses paid	708,944	803,834	798,571	1,287,415	1,036,255
Ratio to premium income of—	%	%	%	%	%
(*a*) Losses	55.80	48.84	49.96	49.87	53.08
(*b*) Expenses, etc. ..	30.84	33.77	35.78	36.68	34.97
(*c*) Trade surplus ..	13.36	17.39	14.26	13.45	11.95

(iii) *Liabilities and Assets.* The liabilities and assets for the period 1935–36 to 1939–40 are set out in the following table. Comparison of the results for 1939–40 (41 companies), with those for 1935–36 (40 companies) shows that paid-up capital constituted 20 per cent. of the total liabilities in 1939–40, as compared with 25 per cent. in 1935–36. Reserves constituted 46 per cent. and 45 per cent. for 1939–40 and 1935–36 respectively. Of the total assets for the same years, Government securities and other investments constituted 67 per cent. and 66 per cent. Figures for years later than 1939–40 are not available.

FIRE, MARINE AND GENERAL INSURANCE COMPANIES.

Particulars.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40
PAID-UP CAPITAL, RESERVES AND LIABILITIES.					
	£	£	£	£	£
Paid-up capital	6,566,758	6,674,188	6,676,188	6,823,065	6,859,065
Reserves and reinsurance funds (*a*)	11,773,597	12,623,437	14,347,012	14,184,021	15,843,818
Undivided profits .	988,361	954,871	949,172	1,186,969	1,361,451
Losses unsettled	1,057,319	1,309,361	1,633,225	1,629,354	2,323,514
Sundry creditors, etc. ..	1,632,589	1,833,367	2,141,813	2,093,733	2,516,833
Dividends, etc., to pay ..	423,613	428,751	453,877	418,722	496,706
Life assurance funds (*b*) ..	3,594,919	3,860,147	4,153,530	4,448,233	4,793,471
Total Liabilities ..	26,037,156	27,684,122	30,354,817	30,784,097	34,194,858

(*a*) Including amount required as reserves against unexpired risks. (*b*) Some of the companies transact life business.

FIRE, MARINE AND GENERAL INSURANCE COMPANIES—*continued.*

Particulars.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40
INVESTMENTS AND OTHER ASSETS.					
	£	£	£	£	£
Loans on mortgage ..	906,802	923,781	1,190,444	953,499	934,330
Government securities, etc.	16,865,834	18,186,694	19,666,290	20,287,975	22,914,015
Landed and other property	3,066,336	3,158,269	3,434,926	3,683,085	3,803,878
Fixed deposits, etc. ..	1,973,553	2,001,642	1,933,967	1,946,707	1,927,038
Loans on life policies (*a*) ..	307,938	347,400	380,594	423,282	457,105
Investments	234,226	252,234	176,995	55,078	(*b*)
Cash and bills receivable ..	966,288	996,553	1,340,647	1,241,924	1,687,421
Sundry debtors and other assets..	1,716,179	1,817,549	2,230,954	2,192,547	2,471,071
Total Assets ..	26,037,156	27,684,122	30,354,817	30,784,097	34,194,858

(*a*) Some of the companies transact life business. (*b*) Included with Government securities, etc.

2. **Aggregate Australian Business.**—(i) *States.* While the foregoing statements relate only to those companies whose head offices are located in Australia, New Zealand or Fiji, the following particulars, which are somewhat restricted in the range of information, are in respect of all companies operating in Australia. During 1946–47 (1945–46 in brackets) revenue from premiums amounted to £25,252,488 (£21,130,809) and from the net interest on investments, etc., to £1,244,227 (£1,096,560), totalling £26,496,715 (£22,227,369). Expenditure on losses amounted to £12,572,747 (£9,536,515), contributions to Fire Brigades £673,319 (£587,938), commission and agents' charges £2,619,662 (£2,200,695), expenses of management £4,654,384 (£3,724,330), and taxation £1,625,403 (£1,989,281), a total of £22,145,515 (£18,038,759).

The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims paid less reinsurances, together with the proportions of losses on premiums for all classes of insurance other than life for the years 1945–46 and 1946–47.

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES.

State.	Premiums, less reinsurances and returns.		Losses, less reinsurances.		Proportion of losses on premiums.	
	1945–46.	1946–47.	1945–46.	1946–47.	1945–46.	1946–47.
	£	£	£	£	%	%
New South Wales ..	9,509,575	11,280,382	4,728,256	5,992,909	49.72	53.13
Victoria	5,785,433	7,114,616	2,225,397	3,009,729	38.47	42.30
Queensland	2,513,437	2,787,013	1,290,648	1,806,930	51.35	64.83
South Australia ..	1,331,808	1,666,543	512,800	675,089	38.50	40.51
Western Australia ..	1,444,946	1,751,278	611,433	868,571	42.32	49.60
Tasmania	545,610	652,656	167,981	219,519	30.79	33.63
All States ..	21,130,809	25,252,488	9,536,515	12,572,747	45.13	49.79

(ii) *Classes of Insurance.* The following statement shows premiums and losses in respect of the principal classes of risks, with the proportions of losses on premiums, for the years 1945–46 and 1946–47 :—

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES, PRINCIPAL CLASSES OF RISK.

Class of Risk.	Premiums, less reinsurances and returns.		Losses, less reinsurances.		Proportion of Losses on Premiums.	
	1945–46.	1946–47.	1945–46.	1946–47.	1945–46.	1946–47.
	£	£	£	£	%	%
Fire	7,008,210	7,775,221	1,730,442	2,101,029	24.69	27.02
Workers' Compensation	5,976,861	7,128,805	4,436,596	5,610,173	74.23	78.70
Motor Vehicle—						
Compulsory Third Party	1,074,861	1,143,536	692,420	1,059,686	64.42	92.67
Other	2,089,520	2,864,587	1,196,137	1,953,701	57.24	68.20
Marine	1,637,193	2,367,362	407,359	638,309	24.88	26.96
All other	3,344,164	3,972,977	1,073,561	1,209,849	32.10	30.45
Total	21,130,809	25,252,488	9,536,515	12,572,747	45.13	49.79

The volume of business measured by the amount of premium income shows that fire insurance represented about 33.2 per cent. of the total business during 1945–46 and 30.8 per cent. during 1946–47, while next in importance were workers' compensation 28.3 per cent. during 1945–46 and 28.3 per cent. during 1946–47, and motor vehicles (including compulsory third party insurance) 15.0 per cent. in 1945–46 and 15.9 per cent. in 1946–47. Marine insurance constituted 7.7 per cent. in 1945–46 and 9.4 per cent. in 1946–47.

During the three years 1932–33 to 1934–35 less than 45 per cent. of the premium income was required on the average to meet losses. Up to 1939–40 the proportion of losses on premiums did not move much from the 50 per cent. mark, but between 1940–41 and 1943–44 it had dropped to 41.32 per cent. In 1944–45 it increased to 46.87 per cent. and in 1945–46 and 1946–47 it was 45.13 per cent. and 49.79 per cent. respectively.

3. **Commonwealth Marine War Risks Insurance Board.**—Information given in the two preceding paragraphs excludes the transactions of the Commonwealth Marine War Risks Insurance Board. With a view to stabilizing premium rates, the Commonwealth Government, in February, 1941, set up this Board to undertake marine war risk insurance. At the outset, the Board confined its activities to the insurance of Australian ships (the majority of which were previously insured in Great Britain) against war risks, and, during its early months, practically the whole of the Australian mercantile fleet was covered. From the end of 1941 to the middle of 1943, however, vessels which had been requisitioned by the Shipping Control Board were not insured with the Insurance Board as the Shipping Control Board made its own internal arrangements to insure these vessels This internal arrangement continued until 1st July, 1943, after which date the Shipping Control Board insured all the requisitioned vessels with the Insurance Board. With the worsening of the war situation in 1942, the Board extended its activities from March, 1942, to cover the insurance of certain essential imported cargoes, and, from July, 1942, to cover all coastal cargoes. The cover provided by the Board was confined to the insurance against war risks, and ordinary marine cover was not generally provided. Transactions of the Board for the years 1940–41 to 1946–47 are shown in the following table.

COMMONWEALTH MARINE WAR RISKS INSURANCE BOARD: SUMMARY OF TRANSACTIONS.

Year.	Net Premiums Received.	Expenditure.		
		Claims Paid.	Other Expenses.	Total
	£	£	£	£
1940–41	154,853	..	15	15
1941–42	443,820	80,103	632	80,735
1942–43	2,086,824	1,333,687	48,654	1,382,341
1943–44	2,685,780	855,172	48,670	903,842
1944–45	1,634,770	281,385	23,684	305,069
1945–46	428,393	30,321	6,901	37,222
1946–47	92,984	50,232	2,757	52,989

E. FRIENDLY SOCIETIES.

1. **General.**—Friendly societies are an important factor in the social life of the community, as probably more than one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership is over 620,000, but, as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward annual returns as to their membership and their finances to the Registrar, and reports are published in most of the States dealing with the returns received. The figures in the following tables are for the year 1945–46 in respect of all States except Tasmania, where they relate to the calendar year 1946; Queensland, where they relate to 1944–45; and New South Wales, where they relate to the year 1938–39. In New South Wales particulars for later years have not been tabulated because of staff shortages.

2. **Number of Societies, Lodges and Members.**—The number of different societies and lodges, the total number of benefit members at the end of the year, and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES: SOCIETIES, LODGES AND MEMBERS.(*a*)

State.	Number of Registered Friendly Societies.	Number of Branches.	Benefit Members at End of Year.	Average Number of Benefit Members during the Year.
New South Wales (*b*)	33	2,402	211,170	211,653
Victoria (*c*)	109	1,463	204,513	205,520
Queensland	26	570	73,594	73,452
South Australia (*d*)	17	(*e*) 873	80,419	80,411
Western Australia (*d*)	13	320	30,345	29,605
Tasmania	20	174	23,728	(*f*) 23,676

(*a*) See par. 1 for years covered. (*b*) Excludes twenty-one miscellaneous societies consisting of Medical Institutes, Dispensaries, and Burial Societies. (*c*) Excludes Dispensaries and Juvenile branches. (*d*) Excludes Juvenile branches. (*e*) Societies containing male and female branches counted as two branches. (*f*) Estimated.

3. **Sickness and Death Returns.**—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks in the aggregate for which they received pay, and the average per member sick, and, further, the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES : SICKNESS AND DEATH RETURNS.(*a*)

State.	Number of Members who received Sick Pay.	Total Number of Weeks Sick Pay Granted.	Average Number of Weeks per Member Sick.	Benefit Members.	
				Deaths.	Proportion of deaths per 1,000 (Average).
New South Wales ..	52,340	522,174	9.98	2,708	12.82
Victoria	47,711	482,535	10.11	2,759	13.42
Queensland	(*b*) 12,786	(*b*)136,575	10.68	993	13.49
South Australia	17,433	194,788	11.17	1,145	14.24
Western Australia ..	5,993	59,686	9.96	411	13.88
Tasmania	4,185	45,073	10.77	346	14.61

(*a*) See par. 1 for years covered. (*b*) Females counted as half-members in these totals.

4. **Revenue and Expenditure.**—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the following table to group the revenue under the main headings :—

FRIENDLY SOCIETIES : REVENUE.(*a*)

State.	Entrance Fees, Members' Contributions and Levies.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue
	£	£	£	£
New South Wales	767,621	208,651	29,769	1,006,041
Victoria	868,310	286,697	81,545	1,236,552
Queensland	244,501	91,269	(*b*)	335,770
South Australia	263,630	145,812	24,179	433,621
Western Australia	114,626	29,992	4,205	148,823
Tasmania	89,420	22,345	29,263	141,028

(*a*) See par. 1 for years covered. (*b*) Included in interest, dividends and rents.

(ii) *Expenditure.* The returns relating to expenditure are in greater detail than those for revenue and particulars of the major items are shown below.

FRIENDLY SOCIETIES : EXPENDITURE.(*a*)

State.	Sick Pay.	Medical Attendance and Medicine.	Sums Payable at Death of Members and Members' Wives.	Administration.	All other Expenditure.	Total Expenditure.
	£	£	£	£	£	£
New South Wales ..	278,738	306,029	89,368	164,570	27,931	866,636
Victoria	288,436	380,917	69,693	160,433	145,778	1,045,257
Queensland	85,050	104,734	43,858	49,379	(*b*)	283,021
South Australia ..	100,700	108,801	50,203	51,236	50,230	361,170
Western Australia ..	33,121	48,172	19,454	25,411	4,353	130,511
Tasmania	25,997	35,618	24,047	20,382	10,115	116,159

(*a*) See par. 1 for years covered. (*b*) Included in administration.

5. **Funds.**—The funds of friendly societies in each State at the end of the year covered by the statistics available were :—New South Wales, £4,908,463 ; Victoria, £7,568,888 ; Queensland, £2,333,717 ; South Australia, £3,524,616 ; Western Australia, £818,846 ; Tasmania, £591,840.

F. PROBATES.

1. **Probates and Letters of Administration.**—The following particulars give some idea of the number and value of estates of deceased persons in each State for the latest year for which information is available. Later particulars are not available in some States because the compilation of these statistics was discontinued for the duration of the war and has not yet been resumed. Owing to differences in legislation in the various States the figures are not entirely comparable. The details for each State are shown in the table hereunder :—

PROBATES AND LETTERS OF ADMINISTRATION.

Particulars.		New South Wales. 1944–45. (*a*)	Victoria. 1945.	Queensland. 1944–45.	South Australia. 1940.	Western Australia. 1945.	Tasmania. 1945. (*b*)
Probates—							
Estates	No.	13,321	8,075	1,442	1,816	1,852	911
Gross value ..	£	(*c*)	(*d*)	6,780,958	5,600,166	4,348,072	2,976,996
Net Value ..	£	29,199,113	(*d*)	(*c*)	4,669,225	3,834,133	2,730,739
Letters of Administration—							
Estates	No.	(*d*)	2,062	249	200	318	122
Gross value ..	£	(*d*)	(*d*)	460,226	268,498	146,524	165,061
Net Value ..	£	(*d*)	(*d*)	(*c*)	176,604	130,555	139,747
Total—							
Estates	No.	13,321	10,137	1,691	2,016	2,170	1,033
Gross value ..	£	(*c*)	28,182,034	7,241,184	5,868,664	4,494,596	3,142,057
Net Value ..	£	29,199,113	25,795,315	(*c*)	4,845,829	3,964,688	2,870,486

(*a*) Total estates of deceased persons assessed for death duty. (*b*) Estates dealt with by Taxation Department. (*c*) Not available. (*d*) Not available separately.

2. **Intestate Estates administered by Curator.**—The number of intestate estates administered by the Curator, and the amount of unclaimed money paid into Consolidated Revenue, in each State, during the latest year for which information is available, are given hereunder :—

INTESTATE ESTATES ADMINISTERED BY CURATOR.(*a*)

Particulars.		Vic. 1940.	Q'land. 1944–45.	S. Aust. 1940.	W. Aust. 1940.	Tas. 1945.
Intestate estates administered by Curator during year—						
Number	..	195	977	185	454	111
Gross value	£	103,346	317,678	108,404	29,408	35,204
Net Value	£	88,950	250,768	77,488	(*b*)	(*b*)
Unclaimed money paid into Consolidated Revenue by Curator during year	£	9,912	(*c*) 9,108	5,266	4,209	(*b*)

(*a*) Not included above in the table of Probates and Letters of Administration granted. Particulars for New South Wales are not available. (*b*) Not available. (*c*) Paid to Unclaimed Moneys Fund.

CHAPTER XV.

PUBLIC FINANCE.

NOTE.—The subject of " Public Finance " is dealt with in this Chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand a combination of these two divisions under the heading of Commonwealth and State Finance. In view of their importance a separate division relating to taxes on income has been included.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. **Financial Provisions of the Constitution.**—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 20–23 of this issue). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pages 633–639 of this issue a *résumé* is given of the constitutional obligations upon the Commonwealth regarding payments to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the State Governments, bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund, the last-mentioned fund coming into existence in the financial year 1911–12.

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

1. **Provisions of the Constitution.**—The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (*see* page 20 of this issue).

2. **Annual Results of Transactions.**—The following statement shows, for the period 1927–28 to 1946–47, the receipts, expenditure and excess receipts or deficiency for each year, together with the accumulated result and the payments made from the excess receipts.

The receipts and expenditure on account of the balance of interest on States' Debts payable by the States to the Commonwealth under the Financial Agreement have been excluded.

COMMONWEALTH CONSOLIDATED REVENUE: RECEIPTS, EXPENDITURE, ETC.

Year.	Receipts.	Expenditure.	Ordinary Transactions.		Payments from Excess Receipts.	Accumulated Result.	
			Excess Receipts.	Deficiency.		Excess Receipts.	Deficiency. (*a*)
	£	£	£	£	£	£	£
1927–28 ..	73,808,227	76,438,464	..	2,630,237	*b*2,820,000	..	2,628,743
1928–29 ..	74,894,799	77,253,774	..	2,358,975	..	..	4,987,718
1929–30 ..	77,143,389	78,614,392	..	1,471,003	..	..	6,458,721
1930–31 ..	69,566,920	80,324,539	..	10,757,619	..	..	17,216.340
1931–32 ..	71,532,298	70,218,207	1,314,091	..	..	1,314,091	17,216,340
1932–33 ..	73,512,809	69,966,201	3,546,608	..	..	4,860,699	17,216,340
1933–34 ..	73,941,953	72,640,383	1,301,570	..	..	6,162,269	17,216,340
1934–35 ..	77,369,105	76,657.900	711,205	..	*c*6,160,000	713,474	17,216,340
1935–36 ..	82,203,341	78,635,621	3,567,720	..	(*c*)713,474	3,567,720	17,002,866
1936–37 ..	82,807,977	81,531,419	1,276,558	..	*c*3,567,720	1,276,558	15,935,146
1937–38 ..	89,458,154	85,963.421	3,494,733	..	*c*1,276,558	3,494,733	15,658,588
1938–39 ..	95,064.790	94,437,481	627,309	..	*c*3,494,733	627,309	15.658,588
1939–40 ..	111,913,784	108,985,409	2,928,375	..	(*c*)627,309	2,928,375	15,658,588
1940–41 ..	150,482,306	150,482,306	..	..	*c*2,928,375	..	15,658,588
1941–42 ..	210,040,969	210,040,969	..	..	..	..	15,658,588
1942–43 ..	294,459.156	294.459,156	..	..	..	..	15,658,588
1943–44 ..	342,188,160	342,188,160	..	..	..	..	15,658,588
1944–45 ..	376.854,101	376,854,101	..	..	..	..	15,658,588
1945–46 ..	390,780,401	390,780,401	..	..	..	..	15,658,588
1946–47 ..	431,256,307	431,256,307	..	..	..	..	15,658,588

(*a*) Met by temporary advance from loan fund. (*b*) Naval construction and defence reserve, £2,250,000; science and industry investigation, £250,000; civil aviation, £200,000; purchase of radium, £100,000; and geophysical survey of Australia, £20,000. (*c*) *See* table following.

3. **Payments from Excess Receipts.**—Particulars of the excess receipts, accumulated balances and allocation of excess receipts since 1934–35 are shown in the following table:—

COMMONWEALTH CONSOLIDATED REVENUE: EXCESS RECEIPTS.

Particulars.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41
	£	£	£	£	£	£	£
Accumulated balance ..	6,162,269	713,474	3,567,720	1,276,558	3,494,733	627,309	2,928,375
Excess receipts	711,205	3,567,720	1,276,558	3,494,733	627,309	2,928,375	..
Total for year .	6,873,474	4,281,194	4,844,278	4,771,291	4,122,042	3.555,684	2,928,375
Expenditure from excess receipts—							
Grants to States ..	2,000,000	500,000	500,000	..	..	..	..
Defence equipment ..	4,160,000	..	2,000,000	..	3,494,733	627,309	2,928,375
Post Office works provision	..	..	..	1,000,000	..		..
Reduction of deficit ..	..	213,474	1,067,720	276,558	..	..	..
Total	6,160,000	713.474	3,567,720	1,276,558	3,494,733	627,309	2,928,375
Accumulated balance ..	713,474	3,567,720	1,276,558	3,494,733	627,309	2,928.375	..

The Consolidated Revenue Fund for the financial years 1940–41 to 1946–47 was exactly balanced, as all available revenue after charging expenditure on ordinary services was used for war purposes and post-war charges. There were no transactions in respect of excess receipts during the years 1931–32 to 1933–34.

Division II.—Revenue.

1. **General.**—The following table furnishes details of the revenue from each source and the amount per head of population under each of the main headings during the years 1938–39 and 1943–44 to 1946–47 :—

COMMONWEALTH CONSOLIDATED REVENUE : SOURCES.

Source.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Taxation	74,111,295	303,751,572	337,994,759	353,211,206	385,615,799
Percentage of Total %	78.0	88.8	89.7	90.4	89.4
Per head of population (a)	£10 14 0	£41 17 0	£46 1 9	£47 12 11	£50 17 4
Business Undertakings	17,892,221	30,281,364	30,737,646	30,119,738	30,956,807
Percentage of Total %	18.8	8.9	8.1	7.7	7.2
Per head of population (a)	£2 11 8	£4 3 5	£4 3 10	£4 1 3	£4 1 8
Territories (b)	355,401	481,983	455,169	508,565	570,600
Percentage of Total %	0.4	0.1	0.1	0.1	0.1
Per head of population (a)	£0 1 0	£0 1 4	£0 1 3	£0 1 5	£0 1 6
Other Revenue—					
Interest, etc.	1,144,014	1,165,755	1,202,118	1,141,601	1,091,976
Coinage	127,764	2,027,885	1,307,037	604,599	..
Defence	151,208	(c) 202,456	(c) 126,318	(c) 250,184	(c) 238,675
Civil Aviation	5,745	770,270	1,172,958	1,166,551	961,295
Health	18,204	24,232	11,889	13,696	15,747
Patents, Trade Marks, etc.	67,914	66,660	76,997	95,122	111,621
Bankruptcy	30,770	16,795	16,077	14,526	14,975
Wool Committee Operations Surplus	..	..	..	..	7,075,000
Commerce and Marine	158,137	211,371	273,837	262,169	171,144
Net Profit on Australian Note Issue	766,730	2,628,971	2,948,472	2,939,405	3,792,384
Balance of Trust Accounts	..	127,046	102,373	..	..
Other	235,387	431,800	428,451	453,039	640,284
Total	2,705,873	7,673,241	7,666,527	6,940,892	14,113,101
Percentage of Total %	2.8	2.2	2.1	1.8	3.3
Per head of population (a)	£0 7 10	£1 1 2	£1 0 11	£0 18 9	£1 17 3
Grand Total	95,064,790	342,188,160	376,854,101	390,780,401	431,256,307
Per head of population (a)	£13 14 6	£47 2 11	£51 7 9	£52 14 4	£56 17 9

(a) Based on mean population of each financial year. (b) Excludes Railways. (c) Further receipts have been credited as an offset to war expenditure.

2. **Taxation.**—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1938–39 and 1943–44 to 1946–47 are shown below :—

COMMONWEALTH TAXATION : TOTAL COLLECTIONS.

Heading.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Customs	31,160,462	20,606,703	21,487,538	28,893,682	45,871,085
Excise	16,471,903	46,684,713	45,689,133	49,066,962	56,375,304
Sales Tax	9,308,334	27,908,691	29,671,802	33,600,175	36,264,585
Flour Tax (b)	1,808,972	1,940,481	1,995,775	1,779,238	1,747,383
Land Tax	1,489,436	3,819,199	3,664,420	3,782,359	3,679,481
Income Taxes (a)	11,882,440	183,799,169	215,534,037	214,593,578	207,764,940
Pay-roll Tax	..	10,902,585	11,088,088	11,499,243	13,646,736
Gold Tax	..	317,720	342,457	383,552	556,435
Estate Duty	1,915,352	2,761,562	3,090,200	3,880,041	4,018,620
Gift Duty	..	221,878	329,296	392,949	544,673
Entertainments Tax	..	4,704,242	5,026,821	5,069,672	5,137,805
Wool Levy (b)	74,396	84,629	75,192	269,755	11,628
Wool Contributory Charge (b)	..	..	..	..	4,497,124
Wheat Tax (b)	..	..	..	..	5,500,000
Total Taxation	74,111,295	303,751,572	337,994,759	353,211,206	385,615,799
Percentage of Total Revenue %	78.0	88.8	89.7	90.4	89.4

(a) Includes War-time (Company) Tax, Super Tax, Undistributed Profits Tax and Social Services Contribution. (b) Paid to Trust Fund for assistance to industry concerned.

(*b*) *Percentages of Total Collections.* The following table shows the percentages of each class of taxation of the total collections for the years 1938–39 and 1943–44 to 1946–47.

COMMONWEALTH TAXATION : PERCENTAGES OF TOTAL COLLECTIONS.

Heading.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	%	%	%	%	%
Customs	42.1	6.8	6.4	8.2	11.9
Excise	22.3	15.4	13.6	13.9	14.6
Sales Tax	12.6	9.2	8.8	9.5	9.4
Flour Tax	2.4	0.6	0.6	0.5	0.5
Land Tax	2.0	1.3	1.1	1.1	1.0
Income Taxes (*a*)	16.0	60.5	63.4	60.8	53.9
Pay-roll Tax	..	3.6	3.3	3.2	3.6
Gold Tax	..	0.1	0.2	0.1	0.1
Estate Duty	2.6	0.9	1.0	1.1	1.0
Gift Duty	..	0.1	0.1	0.1	0.1
Entertainments Tax	..	1.5	1.5	1.4	1.3
Wool Levy	..	..	..	0.1	..
Wool Contributory Charge ..	..	..	..	..	1.2
Wheat Export Charge	..	..	..	..	1.4
Total	100.0	100.0	100.0	100.0	100.0

(*a*) *See* footnote (*a*) to previous table.

(ii) *Customs Revenue.* (*a*) *Classified.* Particulars of customs revenue for the years 1938–39 and 1943–44 to 1946–47 are shown in the following table :—

COMMONWEALTH CUSTOMS REVENUE : CLASSIFICATION.

Classes.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Ales, spirits and beverages	1,165,503	468,140	505,319	588,378	694,622
Tobacco and manufactures thereof ..	3,256,496	4,906,106	4,929,860	4,968,210	7,791,112
Sugar	7,238	73	6	244	2,602
Agricultural products and groceries ..	1,365,938	602,971	770,959	937,704	1,099,924
Textiles and attire ..	2,801,103	982,366	1,072,009	1,412,007	3,368,675
Metals and machinery	2,385,882	1,159,354	807,172	1,124,315	2,387,402
Oils, paints, etc. ..	9,927,346	7,547,540	8,477,532	12,137,483	16,625,724
Earthenware, etc. ..	509,980	132,595	148,037	285,352	514,795
Drugs and chemicals ..	309,984	143,730	177,102	205,906	363,858
Wood, wicker and cane	739,057	171,241	247,627	331,396	556,210
Jewellery and fancy goods	480,916	326,131	351,089	557,375	758,058
Leather and rubber ..	477,163	273,959	223,070	239,472	593,859
Paper and stationery	453,548	88,019	65,985	92,125	392,066
Vehicles	2,061,762	31,676	27,094	248,535	2,091,639
Musical instruments ..	31,589	376	401	3,433	13,931
Miscellaneous articles	1,023,556	495,904	689,339	1,321,467	1,446,616
Primage	3,913,578	2,334,483	2,130,030	3,165,460	6,204,238
Special War Duty ..	..	788,125	686,553	1,038,871	628,577
Other receipts ..	249,823	153,914	178,354	235,949	337,177
Total Customs Revenue ..	31,160,462	20,606,703	21,487,538	28,893,682	45,871,085

(*b*) *States.* The following table shows the Customs Duties collected in each State during the years 1938–39 and 1943–44 to 1946–47.

COMMONWEALTH CUSTOMS REVENUE : COLLECTIONS IN EACH STATE.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales(*a*) ..	14,070,130	9,755,631	10,752,935	13,396,819	20,809,795
Victoria	9,970,730	6,396,566	6,384,988	9,065,158	14,615,959
Queensland.. ..	2,977,792	2,159,260	1,915,306	2,720,265	4,286,791
South Australia (*b*) ..	2,090,020	1,140,820	1,173,606	1,840,267	3,303,044
Western Australia ..	1,653,906	833,569	862,161	1,344,621	2,153,351
Tasmania	397,884	320,857	398,542	526,552	702,145
Total	31,160,462	20,606,703	21,487,538	28,893,682	45,871,085

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(iii) *Excise Revenue.* (*a*) *Classified.* Particulars of the amount of Excise collected under each head during the years 1938–39 and 1943–44 to 1946–47 are given hereunder :—

COMMONWEALTH EXCISE REVENUE : CLASSIFICATION.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Beer	7,288,579	21,588,113	21,511,748	22,519,610	27,246,527
Spirits	1,604,220	5,193,647	5,256,415	7,105,129	6,101,353
Tobacco	3,867,983	8,751,326	8,234,055	8,593,368	9,881,397
Cigars and cigarettes..	2,418,723	8,113,201	7,759,980	7,914,129	9,462,084
Cigarette papers ..	530,868	873,116	797,924	683,658	938,809
Petrol	581,978	370,618	324,612	318,253	866,508
Matches	81,960	1,190,950	1,189,821	1,142,206	1,364,194
Playing cards ..	11,432	44,028	42,475	33,959	45,728
Miscellaneous ..	86,160	559,714	572,103	756,650	468,704
Total Excise Revenue ..	16,471,903	46,684,713	45,689,133	49,066,962	56,375,304

(*b*) *States.* Excise collections in each State for the years 1938–39 and 1943–44 to 1946–47 were as follows :—

COMMONWEALTH EXCISE REVENUE : COLLECTIONS IN EACH STATE.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales(*a*) ..	6,940,301	22,080,746	21,325,832	22,930,149	27,899,853
Victoria	5,687,832	14,276,275	14,455,468	15,550,390	16,633,229
Queensland.. ..	1,538,042	4,013,020	3,886,363	3,834,688	4,342,885
South Australia (*b*) ..	1,018,148	2,670,820	2,628,509	2,781,370	3,188,665
Western Australia ..	1,103,481	3,074,150	2,807,629	3,213,743	3,423,347
Tasmania	184,099	569,702	585,332	756,622	887,325
Total ..	16,471,903	46,684,713	45,689,133	49,066,962	56,375,304

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(iv) *Other Taxation.* (*a*) *General.* Other taxes are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State. Taxes, however, may be paid to any office, so that the sums actually received by any office do not correspond to the assessments made by that office and frequently differ by very large amounts. Consequently the actual receipts by any State office, e.g., of income tax by the Queensland office, may include tax in respect of Central Office or New South Wales assessments, and, therefore, may not be a proper measure of income tax paid on account of income derived in Queensland.

The actual receipts by the various offices are the figures of necessity used by the Treasury for accounting purposes, and may be called the " Treasury " figures. In order to show a more significant picture of the taxation in each State, figures furnished by the Commissioner of Taxation, which refer strictly to the assessments made by the State office concerned, are used in the following tables. The totals of these figures do not quite agree with the total Treasury figures shown on page 610, owing to certain technicalities of accounting. The Taxation Office figures present a fair comparison between States, e.g., in taxation paid per head, but do not give the absolute measure of taxation, because the Central Office collections, which include taxation on account of all States, have not been allocated to the States. In the absence of precise information, it may be assumed, as a rough approximation, that Central Office collections may be divided among States in proportion to State office collections. It is probable, however, that a somewhat larger share is derived from the more populous States, New South Wales and Victoria.

(*b*) *Land Tax.* Commonwealth Land Tax was first imposed on the unimproved value of land in 1910–11. The following table shows the rates of Land Tax imposed for each assessment year from 1933–34 to 1947–48 :—

LAND TAX : RATE OF TAX PER £1 OF TAXABLE VALUE.

(T = Taxable Value.)

Assessment Year.	Residents.			Absentees.(*a*)				
	If the Taxable Value is from £1 to £75,000—	If the Taxable Value is over £75,000—		If the Taxable Value is from £1 to £80,000—		If the Taxable Value is over £80,000—		
		On £75,000–	On excess over £75,000–	On £5,000–	On excess over £5,000—	On £5,000–	On next £75,000–	On excess over £80,000–
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1933–34 to 1937–38	$\frac{45}{100}\left(1+\frac{T}{18.750}\right)$	2.25	4.05	0.45	$\frac{45}{100}\left(2+\frac{T-5{,}000}{18{,}750}\right)$	0.45	2.7	4.5
1938–39 to 1939–40	$\left(\frac{1}{2}+\frac{T}{37{,}500}\right)$	2.5	4.5	0.5	$\left(1+\frac{T-5{,}000}{37{,}500}\right)$	0.5	3.0	5.0
1940–41 to 1947–48 (*b*)	$\left(1+\frac{T}{18{,}750}\right)$	5.0	9.0	1.0	$\left(2+\frac{T-5{,}000}{18{,}750}\right)$	1.0	6.0	10.0

(*a*) Absentees are not allowed an exemption of £5,000 granted to residents. (*b*) In addition, if the taxable value exceeds £20,000, there is payable for 1941–42 and subsequent years a super tax equal to the lesser amount of the following :—(i) twenty per cent. of the amount of land tax ; or (ii) one per cent. of the amount by which the taxable value of the land exceeds £20,000.

Under the National Security (Values for Land Tax) Regulations the revaluations of land for the purposes of the Land Tax Assessment Act 1910–1940 were postponed until after the war. Thereby the values of land, or of interests in land, as assessed for the financial year 1939–40, were adopted for the financial year 1940–41 and subsequent years for the duration of the war. An amendment to the regulations permitted the application of lower values in cases of assessments at a lower value prior to 13th March, 1942, or after that date in consequence of objections or protests lodged previously.

In addition, where a taxpayer had furnished a full and complete return of land owned at 30th June in any year prior to 1942, the lodgment of further returns was dispensed with. There is an exception in respect of changes in ownership of land. Under section 12 of the Defence (Transitional Provisions) Act 1946 the provisions of the National Security (Values for Land Tax) Regulations were incorporated in the Land Tax Assessment Act 1910–1946 and revaluations of land for purposes of the Act were postponed until after the assessment year commencing on 1st July, 1947.

Land Tax receipts in each State and Central Office for the years 1938–39 and 1943–44 to 1946–47 were as follows. The receipts referred to in this table differ slightly from the collections shown on page 610 because some refunds credited before 30th June were not paid until after that date.

LAND TAX RECEIPTS.

State, etc.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Central Office	525,959	1,477,004	1,386,039	1,493,445	1,500,037
New South Wales ..	509,913	1,264,090	1,224,776	1,174,787	1,202,023
Victoria..	290,798	718,826	699,162	690,445	690,824
Queensland	29,568	64,424	63,801	62,579	61,604
South Australia	55,280	139,742	137,338	137,705	131,481
Western Australia ..	63,854	117,753	116,015	112,158	106,695
Tasmania	12,879	36,687	37,666	37,508	37,114
Total	1,488,251	3,818,526	3,664,797	3,708,627	3,729,778

(c) *Estate Duty*. The Estate Duty Act 1914 and Estate Duty Assessment Act 1914–1928 imposed a duty on the estates of deceased persons the net value of which exceeded £1,000. The rate of tax, where the value of the estate for duty did not exceed £2,000, was £1 per cent. Where the value of the estate for duty exceeded £2,000, the rate was increased by one-fifth of £1 for each £1,000 or part thereof in excess of £2,000, to a maximum rate of £15 per cent. on estates over £71,000. Where the estate passed to a widow, children or grand-children, duty was payable at two-thirds of the ordinary rate.

By the Estate Duty Assessment Act 1940 the Estate Duty Assessment Act 1914–1928 was amended to allow the following statutory exemption, namely :—(*a*) where the whole of the estate passes to the widow, children or grand-children of the deceased, the sum of £2,000 decreasing by £1 for every £10 by which the value exceeds £2,000 up to £10,000, and thereafter decreasing by £1 for every £2 by which the value exceeds £10,000 ; (*b*) where no part of the estate passes to the widow, children or grand-children, the sum of £1,000 decreasing by £1 for every £10 by which the value exceeds £1,000 up to £6,000, and thereafter decreasing by £1 for every £8 by which the value exceeds £6,000 ; and (*c*) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (*a*) and (*b*).

Under the Estate Duty Act 1940 the following new rates were imposed :—£1 to £10,000, 3 per cent. ; £10,001 to £20,000, 3 per cent. to 6 per cent. ; £20,001 to £100,000, 6 per cent. to 18 per cent. ; £100,001 to £500,000, 18 per cent. to 20 per cent. ; over £500,000, 20 per cent. By the Estate Duty Act 1941 these rates were amended to the following :—£1 to £10,000, 3 per cent. ; £10,001 to £20,000, 3 per cent. to 6 per cent. ; £20,001 to £120,000, 6 per cent. to 26 per cent. ; £120,001 to £500,000, 26 per cent. to 27.9 per cent. ; over £500,000 27.9 per cent.

Under the Estate Duty Assessment Act 1914–1940 provision was made for the exemption of the estates of members of the Forces who died on active service or within one year after its termination from injuries received or disease contracted on active service, provided the value of the estate did not exceed £5,000. In June, 1942, an amendment provided for an exemption of £5,000 in respect of the estates of those persons who were members of the Forces and who died during the war or within three years of its termination. The exemption was restricted to estates passing to the widow, children, grand-children, parents, brothers, sisters, nephews or nieces of the deceased.

Particulars of the collections in each State and Central Office for the years 1938–39 and 1943–44 to 1946–47 are shown in the following table. These figures differ slightly from the figures on page 610 as some refunds were credited before 30th June and not paid until after that date.

ESTATE DUTY RECEIPTS.

State, etc.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Central Office	999,202	1,050,271	1,102,540	1,818,735	1,592,910
New South Wales ..	422,567	723,533	696,499	697,960	790,670
Victoria..	294,406	696,781	819,147	811,441	1,062,204
Queensland	60,041	112,670	141,596	183,006	248,806
South Australia	82,789	107,335	166,020	143,030	167,436
Western Australia ..	34,074	54,716	135,055	91,614	84,582
Tasmania	15,960	23,186	30,616	33,935	55,666
Northern Territory ..	..	..	..	..	101
Total	1,909,039	2,768,492	3,091,473	3,779,721	4,002,375

Particulars of the number and value of estates with duty assessed, for each of the assessment years 1938–39 and 1943–44 to 1946–47, are given in the following table :—

ESTATE DUTY ASSESSMENTS.

Particulars.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Number of Estates ..		9,681	8,328	9,754	9,317	10,988
Gross Value Assessed	£,000	65,699	62,726	74,186	74,154	87,354
Deductions ..	£'000	12,630	11,314	13,248	13,024	15,292
Statutory Exemption	£'000	..	9,976	11,654	11,034	12.973
Dutiable Value ..	£'000	53,069	41,436	49,284	50,096	59,089
Duty Payable ..	£	2,002,283	2,976,162	3,322,989	3,811,844	4,230,900
Average dutiable value	£	5,482	4,976	5,053	5,377	5,378
Average duty per estate	£	207	357	341	409	385

(*d*) *Gift Duty.* The Gift Duty Assessment Act 1941–1947 and the Gift Duty Act 1941–1947 impose a gift duty on all gifts made after the 29th October, 1941. A gift has been defined as any disposition of property, which is made otherwise than by will, without adequate consideration in money or money's worth.

There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty have been fixed by the Gift Duty Act 1941–1947 :—

Value of all Gifts made within Eighteen Months.	Rate of Duty.
Not exceeding £2,000 (*a*)	Nil
£2,001 (*a*) to £10,000	3%
£10,001 to £20,000	3% to 6%
£20,001 to £120,000	6% to 26%
£120,001 to £500,000	26% to 27.9%
£500,001 and over	27.9%

(*a*) Prior to 3rd June, 1947, no duty was payable if the value of all gifts as defined above did not exceed £500. If the value of all gifts exceeded £500 but did not exceed £10,000 the rate of duty was 3 per cent.

The receipts from gift duty in each State for the years 1942–43 to 1946–47 are shown in the following table. The figures shown in the table differ from those shown on page 610 because certain refunds credited before 30th June were not paid until after that date.

GIFT DUTY.

State.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	43,505	75,993	135,810	184,772	194,946
Victoria..	67,796	78,953	110,339	106,014	203,458
Queensland	13,004	23,036	30,974	31,898	43,665
South Australia	11,206	28,907	30,075	36,829	44,328
Western Australia ..	5,208	10,109	11,953	23,128	44,653
Tasmania	3,436	3,697	6,008	9,172	6,542
Northern Territory ..	..	..	118	15	86
Total	144,155	220,695	325,277	391,828	537,678

(*e*) *Income Taxes.* Details of Commonwealth and State taxes on income are given in Section "D" of this Chapter.

(*f*) *Pay-roll Tax.* The Pay-roll Tax Assessment Act 1941–42 and the Pay-roll Tax Act 1941 imposed a pay-roll tax of 2½ per cent. on all wages in excess of £20 per week paid by an employer after 30th June, 1941. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide the main part of the money required.

Pay-roll tax is collected in a similar manner to sales tax. Employers are required to register and to furnish a monthly return of all wages paid.

The following table shows the receipts from pay-roll tax in each State for the years 1942–43 to 1946–47. The figures shown vary slightly from the collections shown on page 610 because some refunds which were credited before 30th June were not paid until after that date.

PAY-ROLL TAX.

State.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	4,532,422	4,709,183	4,837,455	4,942,715	5,793,035
Victoria..	3,002,443	3,099,587	3,123,364	3,294,748	3,874,667
Queensland	1,265,071	1,384,810	1,365,981	1,403,298	1,609,848
South Australia	839,048	845,106	853,874	879,299	1,085,430
Western Australia ..	548,424	558,041	608,497	653,624	813,885
Tasmania	257,133	282,468	286,689	314,663	368,412
Northern Territory ..	4,074	3,336	3,909	4,385	8,840
Total	10,448,615	10,882,531	11,079,769	11,492,732	13,554,117

(*g*) *Gold Tax.* The Gold Tax Collection Act 1939–1940 and the Gold Tax Act 1939 imposed a tax on all gold delivered to the Commonwealth Bank of Australia or to an agent of that Bank, on and after 15th September, 1939, of 50 per cent. of the amount by which the price payable by the Bank for each fine ounce of gold delivered exceeded £9. This tax was suspended from 20th September, 1947, by the Gold Tax Suspension Act 1947. The amounts of tax collected during the five years 1942–43 to 1946–47 were as follows :—1942–43, £524,694 ; 1943–44, £317,720 ; 1944–45, £342,457 ; 1945–46, £383,552 ; and 1946–47, £556,435.

(*h*) *Entertainments Tax.* The Entertainments Tax Assessment Act 1942–1946 and Entertainments Tax Act 1942–1946 came into force on 1st October, 1942, following the agreement of the State Governments to the request of the Commonwealth to suspend their entertainments tax legislation for the duration of the war and one year after, thereby enabling the Commonwealth Government to re-enter this field of taxation. Until 1945–46 the Commonwealth recompensed the States by annual payments of £765,787, an amount equal to that collected by the States during the year 1941–42. Thereafter these payments were discontinued and the agreement that the States should not levy a tax on entertainments was terminated. The tax imposed commences with 3d. on an admission price of 1s., and increases thereafter by 2d. for every 6d. or part thereof in excess of 1s. up to 5s. Thereafter the rate increases by 3d. for every 6d. or part thereof. Special rates, approximately 25 per cent. less than those stated above, are imposed in respect of performances on the legitimate stage and similar types of entertainment.

The Entertainments Tax Assessment Act 1944 amended the Entertainments Tax Assessment Act 1942 to bring into the taxable field such places as amusement parks, etc., where the charges for admission to individual entertainments were less than 1s. The rate of tax imposed for these entertainments commences at 1d. on admissions costing 3d. and 4d., and rises to 3d. on admissions costing more than 7½d. but not more than 1s. Thereafter the rate is the same as for other entertainments.

Entertainments tax received during the five years 1942–43 to 1946–47 is shown in the following table. The figures shown in the table differ from those shown on page 610 because certain refunds credited before 30th June were not paid until after that date.

ENTERTAINMENTS TAX.

State, etc.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	1,236,117	1,936,659	2,111,965	2,151,695	2,141,470
Victoria..	861,019	1,307,651	1,395,214	1,410,877	1,534,445
Queensland	488,214	817,342	819,756	753,310	664,700
South Australia	188,533	304,384	290,948	355,131	382,004
Western Australia ..	154,653	239,501	247,709	277,111	281,636
Tasmania	61,551	94,061	106,133	120,431	127,699
Northern Territory ..	4,374	4,732	3,744	2,666	6,671
Total	2,994,461	4,704,330	4,975,469	5,071,221	5,138,625

(*i*) *Sales Tax.* The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or for use in primary production. Certain of these exemptions were withdrawn as from 3rd June, 1940, 22nd November, 1940 and 30th October, 1941. There have since been partial restorations of former exemptions, and from 13th September, 1945, 10th April, 1946, 15th November, 1946 and 20th September, 1947, additional goods, previously taxable, were exempted.

The following are the rates of sales tax imposed since its inception in August, 1930; 2½ per cent. to 10th July, 1931; 6 per cent. to 25th October, 1933; 5 per cent. to 10th September, 1936; 4 per cent. to 21st September, 1938; 5 per cent. to 8th September, 1939; 6 per cent. to 2nd May, 1940; 8⅓ per cent. to 21st November, 1940; 5 per cent., 10 per cent. and 15 per cent. to 29th October, 1941; 5 per cent., 10 per cent. and 20 per cent. to 30th April, 1942; 12½ per cent. and 25 per cent. to 14th November, 1946; and 10 per cent. and 25 per cent. from 15th November, 1946.

The differential rates applicable as from 22nd November, 1940 related to different classes of goods specified in schedules of the Sales Tax (Exemptions and Classifications) Act 1935–1947. The rate of 5 per cent. applied to goods, formerly exempt, which were brought into the taxable field. The rates of 15 and 20 per cent. applied to goods which may be described as being of a non-essential nature, while 10 per cent. was the general rate. Of the May, 1942, rates the 12½ per cent. was the general rate, and included some of those goods previously rated at 5 per cent. The remainder of the 5 per cent. class was again classified as exempt. From 21st July, 1943, the rate on rationed clothing was reduced to 7½ per cent. and from 15th November, 1946, these goods were exempted. From 15th November, 1946, the general rate was reduced to 10 per cent.

Particulars of the net amount of sales tax payable, and the sales of taxable, non-taxable and exempt goods in each State for 1946–47 are given in the following table. The figures for "Tax Collected" are in respect of the periods 1st July to 30th June of each year, adjusted on account of rebates of tax allowed as deductions in returns of taxpayers, while those relating to sales are in respect of the periods 1st June to 31st May.

SALES TAX AND AMOUNT OF SALES, 1946–47.

State, etc.	Gross Taxable Sales.	Non-Taxable Sales.	Sales of Exempt Goods by Registered Persons.	Net Amount of Sales on which Sales Tax was payable.	Tax Collected.		
					Taxation Department.	Customs Department.	Total
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
New South Wales ..	129,027	202,582	185,830	118,770	14,828	737	15,565
Victoria	93,924	150,091	160,539	88,118	10,948	577	11,525
Queensland ..	31,002	19,733	48,240	31,603	4,017	146	4,163
South Australia ..	22,537	26,404	43,158	21,205	2,573	145	2,718
Western Australia..	12,711	12,751	24,323	12,217	1,713	110	1,823
Tasmania ..	5,151	4,887	10,430	4,960	551	24	575
Northern Territory	131	21	336	130	11	..	11
Total ..	294,483	416,469	472,856	277,003	34,641	1,739	36,380

Similar details for Australia as a whole for each year 1937–38 to 1946–47 are given in the following table :—

SALES TAX AND AMOUNT OF SALES.

Year.	Gross Taxable Sales.	Non-Taxable Sales.	Sales of Exempt Goods by Registered Persons.	Net Amount of Sales on which Sales Tax was payable.	Tax Collected.		
					Taxation Department.	Customs Department.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1937–38	198,083	180,117	283,622	183,479	7,342	707	8,049
1938–39	197,809	171,810	280,282	183,296	8,559	758	9,317
1939–40	207,106	196,790	302,479	192,589	11,177	1,019	12,196
1940–41	223,226	252,368	306,734	209,004	18,562	1,256	19,818
1941–42	255,178	337,744	337,869	239,152	25,438	1,473	26,911
1942–43	208,261	358,367	386,255	192,544	27,976	980	28,956
1943–44	217,873	361,189	378,392	204,168	27,243	649	27,892
1944–45	235,117	351,197	380,088	218,202	28,803	884	29,687
1945–46	268,773	341,759	383,151	248,679	32,559	1,152	33,711
1946–47	294,483	416,469	472,856	277,003	34,641	1,739	36,380

In the foregoing tables exempt sales relate to goods exempted from sales tax under the Sales Tax (Exemptions and Classifications) Act 1935–1947, while non-taxable sales relate to goods on which tax is not payable at the time of sale. In this latter case the sale has been made to a registered taxpayer who has quoted his certificate. These sales, however, become taxable before passing into consumption, unless used for a purpose exempted under the Act.

The figures given in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only, are not required to be registered and consequently the volume of their sales is not included in the statistics above.

(*j*) *Flour Tax.* A flour tax of £4 5s. per ton operated from 4th December, 1933 to 31st May, 1934, and of £2 12s. 6d. per ton from 7th January, 1935 to 24th February, 1936. On 5th December, 1938, the Flour Tax was again imposed in a more or less permanent form. The new legislation provided for a tax on flour (not exceeding £7 10s. per ton) varying as the price of wheat varies from 5s. 2d. a bushel at Williamstown. The commencing rate was £5 15s. per ton, since when there have been 22 variations, the highest rate being that reached in August, 1939, £6 2s. 9d., and the lowest in December, 1939, £1 12s. 3d. From 22nd October, 1940 to 21st December, 1947 the rate was £2 8s. 10d. per ton. The rate was declared to be nil as from 22nd December, 1947 because of the rise in wheat prices.

Net receipts after allowing for refunds and tax outstanding are shown in the following table for the years 1938–39 and 1943–44 to 1946–47. The figures vary slightly from the collections shown on page 610 because some refunds were credited before 30th June, but not paid until after that date.

FLOUR TAX.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	704,152	723,556	803,791	681,000	683,733
Victoria..	531,577	553,093	545,935	457,487	461,351
Queensland ..	237,854	310,784	307,596	234,774	253,110
South Australia	141,048	134,316	129,878	174,512	140,829
Western Australia ..	123,856	111,269	107,439	139,369	112,832
Tasmania	55,346	43,186	55,757	53,190	54,768
Total	1,793,833	1,876,204	1,950,396	1,740,332	1,706,623

(*k*) *Wool Levy.* The Wool Tax Act 1936 and Wool Tax Assessment Act 1936 provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. The levy is collected through wool-brokers and dealers who furnish quarterly returns on which the levy is assessed. On wool, not previously taxed in the hands of a broker or dealer, the levy is payable prior to export. The rates fixed by the Wool Tax Act 1936 were: 6d. per bale; 3d. per fadge or butt; and 1d. per bag. By the Wool Tax Act 1945 these rates were increased from 1st June, 1945 to 2s. per bale; 1s. per fadge or butt; and 4d. per bag. Proceeds are devoted to publicity and research in connexion with the wool industry. This levy has been suspended for any period during which the Wool (Contributory Charge) Act 1945 is in operation. The Wool Contributory Charge was levied from 1st July, 1946. The amounts collected from wool levy during the years 1938–39 and 1943–44 to 1946–47 were as follows:—

WOOL LEVY.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	28,889	34,398	29,197	113,850	4,176
Victoria..	15,493	16,620	16,519	45,513	983
Queensland	14,451	15,178	13,409	58,496	4,871
South Australia	8,243	9,168	8,063	21,070	715
Western Australia ..	5,795	7,955	6,695	26,118	842
Tasmania	1,525	1,310	1,309	4,708	41
Total	74,396	84,629	75,192	269,755	11,628

(*l*) *Wool Contributory Charge.* The Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 imposed a charge on all wool produced in Australia and sold, manufactured or exported after a date fixed by proclamation. Wool sold by the Australian Wool Realization Commission is not liable to the charge. The rate of the charge is to be such a percentage of the sale value of the wool as is necessary to provide the following amounts :—

(*a*) The amounts required to meet the share of the industry in the operating expenses of the Joint Organization for the disposal of wool stocks ;

(*b*) the amounts required for payment of interest on the amount spent by the Commonwealth in purchase of wool under the disposals plan ; and

(*c*) the amount of the wool levy.

The Acts came into operation on 1st July, 1946, and the rate fixed was 5 per cent. on the sale value of the wool. From 1st August, 1947 the rate was reduced to 0.75 per cent. Collections in each State during 1946–47 were as follows :—New South Wales, £1,554,997 ; Victoria, £1,315,834 ; Queensland, £747,298 ; South Australia, £399,372 ; Western Australia, £389,879 ; and Tasmania, £89,727, making a total of £4,497,107.

(*m*) *Wheat Export Charge and Wheat Tax.* The Wheat Export Charge Acts 1946 imposed an export charge on wheat (including the content of wheat products) harvested after 30th September, 1945 and exported from the Commonwealth after 30th November, 1945. The rate fixed by the Act is 50 per cent. of the amount by which the export price of fair average quality wheat free on rail at the port of export exceeds 5s. 2d. per bushel. This rate may be reduced by regulation. The Act did not apply to wheat harvested between 1st October, 1945 and 1st October, 1947 and exported by the Australian Wheat Board, but provision was made in the Wheat Tax Act 1946 to collect an amount equivalent to the charge that would have been collected on this wheat, by imposing a tax on all such wheat acquired by the Board. An amount equivalent to the collections under the Wheat Export Charge Acts 1946 and the Wheat Tax Act 1946 is to be paid to the Wheat Prices Stabilization Fund to be used for the purpose of guaranteeing a minimum price to the grower. During 1946–47 collections amounted to £5,500,000.

3. **Business Undertakings.**—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1938–39 and 1943–44 to 1946–47 are contained in the following table :—

POSTMASTER-GENERALS' DEPARTMENT : NET RECEIPTS.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Private boxes and bags ..	74,235	81,646	86,670	91,809	96,484
Commission on money orders and postal notes ..	288,580	301,455	308,226	315,424	347,959
Telegraphs	1,372,300	3,147,752	3,186,495	3,321,343	2,904,538
Telephones	8,039,580	11,719,922	12,270,788	12,583,701	13,317,289
Postage .	6,635,977	10,060,170	10,714,085	10,806,923	11,628,882
Radio	516,178	649,095	660,986	671,571	782,023
Miscellaneous	439,461	719,636	644,561	664,567	725,115
Total	17,366,311	26,679,676	27,871,811	28,455,338	29,802,290

Further particulars of the Postmaster-General's Department's receipts to 1945–46 are given in Chapter V. "Transport and Communication" (part I. Posts, Telegraphs and Telephones).

(ii) *Commonwealth Railways.* The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1938–39 and 1943–44 to 1946–47 :—

COMMONWEALTH RAILWAY REVENUE.

Railway.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Trans-Australian ..	330,643	1,027,401	989,194	768,885	691,740
Central Australia.. ..	137,521	1,736,783	1,045,423	710,648	395,377
North Australia	50,471	822,582	819,884	174,371	58,140
Australian Capital Territory	7,275	14,922	11,334	10,496	9,260
Total	525,910	3,601,688	2,865,835	1,664,400	1,154,517

Further particulars to 1945–46 are given in Chapter V. " Transport and Communication " (part B, Railways).

4. **Other Sources of Revenue.**—Of other sources of revenue, amounting in 1946–47 to £14,113,101, the following are noteworthy ; Interest, £1,091,976 ; Civil Aviation, £961,295 ; Net Profit on Australian Note Issue, £3,792,384 and Wool Committee Operations Surplus, £7,075,000.

Division III.—Expenditure.

1. **Nature of Commonwealth Expenditure.**—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the " book-keeping "* system, into three classes, namely :—

(*a*) Expenditure on transferred services ; (*b*) expenditure on new services ; and (*c*) payments of surplus revenue to the States.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the " book-keeping " system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. Until the end of the year 1903–4, new works, etc. for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement which superseded the "book-keeping" system, a specific subsidy of 25s. per head of population was made annually by the Commonwealth to the States, and there was no further debiting of expenditure to the several States. The States Grants Act 1927 provided for the abolition of the *per capita* payments as from 30th June, 1927. From 1st July, 1928 the temporary provisions of the agreement between the Commonwealth and the several States under the Financial Agreement Act 1928 were operative, and on 1st July, 1929 the Commonwealth Government took over the debts of the States under this agreement which was ratified by all Governments concerned. For further particulars of Commonwealth payments to States and of the Financial Agreement see pages 633–9 and Section C.—Commonwealth and State Finance, paragraph 4 of this issue.

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* For an exposition of the " book-keeping system " *see* Official Year Book No. 6, p. 780.

2. **Details of Expenditure from Consolidated Revenue.**—(i) *General.* The following table gives details of the expenditure from Consolidated Revenue during the years 1938–39 and 1943–44 to 1946–47.

COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE.

Departments, etc.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
War (1914–18) and Repatriation Services (*a*)	19,256,812	19,603,959	19,288,874	18,891,883	19,259,227
Defence, War (1939–45) Services and Post-war Charges (*b*)	(*c*)8,061,359	167,843,327	194,573,719	225,651,219	197,455,890
Total Cost of Departments—					
Governor-General	32,765	32,243	49,121	54,537	46,603
Parliament	444,873	599,208	603,491	550,326	735,576
Prime Minister	*d*1,355,842	1,603,344	1,616,036	1,920,480	2,429,247
External Affairs	70,168	251,164	244,048	562,538	1,305,271
Treasury	2,257,628	3,779,096	3,935,301	4,149,907	4,764,456
Attorney-General	281,497	386,749	433,646	472,604	569,234
Interior	(*e*)1,275,392	807,106	855,575	953,211	1,094,651
Works and Housing	(*f*)	42,438	48,910	108,836	1,600,844
Civil Aviation	328,150	359,591	438,531	738,908	1,258,312
Trade and Customs	1,064,124	815,501	873,457	983,746	1,446,930
Health	338,155	379,326	392,602	428,788	473,392
Commerce and Agriculture ..	994,095	1,033,661	1,042,723	1,374,912	3,605,443
Social Services	324,734	412,139	443,260	665,927	776,129
Supply and Shipping	214,832	275,173	272,865	279,800	331,965
External Territories	(*g*)	19,607	35,374	45,214	55,797
Immigration	(*f*)	31,197	32,420	72,551	183,219
Labour and National Service ..	(*h*)	(*h*)	(*h*)	(*h*)	1,127,430
Transport	(*h*)	(*h*)	(*h*)	(*h*)	57,422
Information	(*h*)	(*h*)	(*h*)	(*h*)	342,280
Post-war Reconstruction ..	(*h*)	(*h*)	(*h*)	(*h*)	559,716
Social Services (*i*)	16,428,396	36,784,940	36,702,821	(*j*)	(*j*)
National Welfare Fund	..	27,889,572	30,000,000	46,499,243	64,646,736
Total, Social Services ..	16,428,396	64,674,512	66,702,821	46,499,243	64,646,736
Business Undertakings—					
Postmaster-General	15,028,233	22,481,577	23,993,463	24,774,998	26,755,701
Railways	1,351,041	3,068,686	2,794,796	2,189,262	1,921,172
Total, Business Undertakings	16,379,274	25,550,263	26,788,259	26,964,260	28,676,873
Territories	1,099,960	1,010,624	1,042,520	1,208,007	3,291,305
New Works	6,565,268	*k* 4,677,278	*k* 5,705,351	*k* 6,659,952	*k* 15,157,465
Payments to or for States—					
Interest on States' Debts (*l*) ..	7,584,912	7,584,912	7,584,912	7,584,912	7,584,912
Sinking Fund on States' Debts ..	1,477,976	1,577,672	1,682,869	1,615,604	1,636,120
Special Grants	2,020,000	2,470,000	2,846,000	2,996,000	4,748,000
Commonwealth Aid Roads and Works	4,266,556	1,486,891	2,200,902	3,327,553	4,805,290
Income Tax Reimbursement ..	..	32,047,342	32,666,316	32,755,270	(*m*)
Income Tax Reimbursement—Special Grants	..	..	..	553,172	2,132,920
Entertainments Tax Reimbursement	..	765,787	765,787	765,787	(*m*)
Tax Reimbursement	(*m*)	(*m*)	(*m*)	(*m*)	39,463,848
Other Grants	300,000	127,569	122,035	16,052	10,103
Total to or for States ..	15,649,444	46,060,173	47,868,821	49,614,350	60,381,193
Assistance to Primary Producers ..	2,014,713	*n* 1,940,481	*n* 3,566,376	*n* 1,949,202	*n* 19,623,703
Grand Total (*o*)	94,437,481	342,188,160	376,854,101	390,780,401	431,256,307
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per Head of Population ..	13 12 8	47 2 11	51 7 9	52 14 4	56 17 9

(*a*) For details, *see* § 5, pp. 651–2. (*b*) For details, *see* § 6, pp. 653–5. (*c*) Departments of Navy, Army, Air, and Supply and Shipping. (*d*) Includes External Territories. (*e*) Includes Works and Housing, and Immigration. (*f*) Included with Interior. (*g*) Included with Prime Minister. (*h*) Included under Defence, War (1939–45) Services and Post-war Charges. (*i*) For details *see* table, page 629. (*j*) Expenditure met from National Welfare Fund. (*k*) Excludes Defence, War (1939–45) Services and Post-war Charges. (*l*) Excludes balance of interest payable on States' Debts (recoverable from States). (*m*) Income and Entertainments Tax Reimbursements Grants were replaced by Tax Reimbursement Grants from 1946–47, *see* pp. 635–7. (*n*) In addition the following amounts were provided under War Services expenditure—1943–44, £12,321,820; 1944–45, £14,280,284; 1945–46, £19,755,385; and 1946–47, £7,719,605. (*o*) Excludes amounts expended from excess receipts of previous years (*see* page 609).

Particulars for each department include interest, sinking fund, superannuation charges, etc., but do not include the expenditure on new works which is given in (iii), page 632 nor that on Defence War (1939–45) and Post-war Services which is given in § 6, pages 653–5. Details of expenditure of each department are given in paragraph (ii) below.

(ii) *Total Cost of Departments.* (*a*) *Introductory.* Under the heading "Total Cost of Departments" are included (i) particulars of expenditure on the estimates of departments in respect of salaries and general expenses, and (ii) particulars of expenditure from special appropriations in respect of salaries of the Governor-General, Ministers, Judges, etc., Government contributions for superannuation, and interest and sinking fund charges, etc., allocated to departments. Expenditure from appropriations for Defence, War (1939–45) Services and Post-war Charges is not included. For these details *see* § 6, pages 653–5.

Information on the functions of the several departments and the acts administered by the Ministers of Departments will be found in Chapter III.—General Government, § 4, pp 76–86.

(*b*) *Governor-General.* Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The expenditure in connexion with the Governor-General and establishment for the five years 1938–39 and 1943–44 to 1946–47 was as follows :—

EXPENDITURE : GOVERNOR-GENERAL AND ESTABLISHMENT.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Salary	10,000	10,000	10,000	10,000	10,000
Government Houses, maintenance, etc.	12,305	13,895	18,584	16,530	23,956
Governor-General's office (*a*)	5,381	4,030	16,125	3,340	8,565
Interest and Sinking Fund	5,079	4,318	4,412	4,667	4,082
Total	32,765	32,243	49,121	34,537	46,603

(*a*) Represents official services outside the Governor-General's personal interests, and carried out mainly at the instance of the Government.

(*c*) *Parliament.* Under this head have been grouped all the items of expenditure connected with the Commonwealth parliamentary government of Australia for the five years 1938–39 and 1943–44 to 1946–47. Although the administration of the Electoral Act and the conduct of elections come within the functions of the Department of the Interior, the expenditure in connexion therewith is fundamentally incurred on account of the parliamentary government system and for that reason is included herein.

EXPENDITURE : COMMONWEALTH PARLIAMENT.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Salaries of Ministers	19,325	22,750	22,750	22,160	22,749
Allowances to Senators ..	36,171	36,063	36,137	36,154	36,200
Allowances to Members of House of Representatives	74,900	75,164	75,400	75,049	74,928
Officers, staff, contingencies, etc.	71,120	86,107	87,349	96,086	111,208
Rent, repairs, maintenance, etc...	14,679	21,978	31,353	40,058	48,150
Printing	22,000	17,651	24,120	25,625	34,924
Travelling expenses of Members..	41,429	58,266	67,000	65,424	66,021
Electoral Office	85,143	103,064	103,396	103,566	106,231
Election expenses	3,232	113,162	102,770	3,646	154,848
Administration of Electoral Act..	20,029	18,555	9,223	33,719	38,079
Interest and Sinking Fund ..	41,444	35,142	35,900	37,975	33,170
Miscellaneous	15,401	11,306	8,093	10,864	9,068
Total	444,873	599,208	603,491	550,326	735,576

In Section 66 of the Constitution provision is made for the payment from Consolidated Revenue of an annual sum for the salaries of Ministers, and Section 48 specifies the amount of the allowance to each Senator and each Member of the House of Representatives. These details, together with subsequent increases, will be found on pages 14 and 18 of this volume, while details of the cost of parliamentary government of the Commonwealth and each State for 1945–46 will be found on page 87.

(*d*) *Prime Minister's Department.* External territories were administered by this department until June, 1941, when the Department of External Territories was created. Particulars of expenditure relating to the administration of external territories for the years 1942–43 to 1946–47 are shown under the heading of that department. The expenditure of the Prime Minister's Department for the years 1938–39 and 1943–44 to 1946–47 is shown in the following table :—

EXPENDITURE : PRIME MINISTER'S DEPARTMENT.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Salaries, contingencies and miscellaneous	160,842	*b*212,225	*b*100,481	*b*127,626	174,647
Audit Office	38,434	(*b*)40,451	(*b*)41,716	(*b*)47,908	108,724
Rent, repairs, etc.	8,120	12,699	13,545	13,872	18,788
Public Service Board's Office ..	50,688	51,746	51,899	63,220	94,456
High Commissioner's Office, London	81,369	*b*103,566	*b*104,855	*b*147,679	263,269
Mail Service, Pacific Islands ..	49,077	(*a*)	(*a*)	(*a*)	(*a*)
Scientific and Industrial Research—					
Council	197,764	668,662	776,596	956,081	1,218,747
Contributions, Grants, etc. ..	75,379	65,914	69,912	81,588	112,121
Australian National University ..	..	..	..	..	14,000
Pensions and Superannuation ..	10,473	12,208	12,887	13,428	14,036
North Australia Survey ..	10,000	..	..	..	..
National Oil Pty. Ltd. Agreement	60,000	..	..	..	..
Interest and Sinking Fund ..	613,696	435,873	444,145	469,078	410,459
Total	1,355,842	1,603,344	1,616,036	1,920,480	2,429,247

(*a*) Included with Department of External Territories. (*b*) Additional expenditure occasioned by the war was provided under War (1939–45) Services.

(*e*) *Department of External Affairs.* The Department of External Affairs was separated from the Prime Minister's Department in 1935–36. Expenditure of the department for the years 1938–39 and 1943–44 to 1946–47 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF EXTERNAL AFFAIRS.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Salaries and General Expenses—	£	£	£	£	£
Administrative	20,129	(*a*)34,680	(*a*)30,555	(*a*)88,938	224,617
Embassy, United States of America	. .	71,072	68,755	96,628	136,691
Legations—					
China	. .	33,049	15,049	39,875	72,993
Union of Soviet Socialist Republics	. .	27,689	30,013	24,136	26,153
France	. .	. .	1,427	30,853	40,015
Brazil	. .	. .	56	38,996	26,274
Chile	. .	. .	. .	6,073	29,603
Netherlands	. .	. .	. .	. .	13,818
High Commissioners (*b*)—					
Canada	. .	17,969	20,356	21,275	32,200
New Zealand	. .	6,250	7,939	11,005	13,723
India	. .	8,403	21,291	23,936	28,457
Eire	. .	. .	. .	. .	9,011
South Africa	. .	. .	. .	805	22,471
Consular Representation abroad	. .	. .	. .	21,923	143,610
Other Representation abroad	. .	. .	. .	30,895	46,625
International Labour Organization, United Nations Organization and other International agencies—Contributions and Representation at Conferences . .	43,329	41,852	39,999	124,486	413,251
Australian National Antarctic Research Expedition	. .	. .	. .	. .	20,062
Miscellaneous	6,710	10,200	8,608	2,714	5,697
Total	70,168	251,164	244,048	562,538	1,305,271

(*a*) Additional expenditure occasioned by the war was provided under War (1939–45) Services.
(*b*) For High Commissioner, United Kingdom, *see* table above.

(*f*) *Department of the Treasury.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Supply and Tender Board, Taxation Office, Superannuation Board, and the Commonwealth Bureau of Census and Statistics. The Government Printing Office is also a sub-department of the Treasury, but its expenditure is charged to Parliament and the Departments concerned. Details of the expenditure of the Treasury for the years 1938–39 and 1943–44 to 1946–47 are given in the following table :—

EXPENDITURE : DEPARTMENT OF THE TREASURY.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Treasury(*a*)	56,528	(*b*) 91,520	(*b*) 89,736	(*b*) 114,748	235,035
Taxation Office	618,537	1,858,211	1,994,069	2,162,228	2,528,293
Superannuation Board . .	8,623	11,480	12,111	12,415	14,291
Census and Statistics . .	60,939	(*b*) 54,873	(*b*) 65,268	(*b*) 74,944	132,717
Census	4,113	. .	. .	. .	244,415
Rent, repairs, etc. . .	23,088	75,349	74,116	83,606	90,695
Interest and Sinking Fund . .	911,004	970,090	980,750	1,051,420	993,130
Exchange	514,240	499,291	500,811	448,217	374,891
Loan Conversion expenses	1,588	132	2,102	48,801	3,039
Gold Tax collection . .	. .	. .	152	15	1,081
Miscellaneous	58,968	218,150	216,186	153,513	146,869
Total	2,257,628	3,779,096	3,935,301	4,149,907	4,764,456

(*a*) Includes Supply and Tender Board. (*b*) Additional expenditure occasioned by the war was provided under War (1939–45) Services.

(*g*) *Attorney-General's Department.* Details of expenditure for the years 1938–39 and 1943–44 to 1946–47 are furnished below :—

EXPENDITURE : ATTORNEY-GENERAL'S DEPARTMENT.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Attorney-General's Office	19,699	43,554	42,887	41,709	42,922
Crown Solicitor's Office	27,642	84,238	109,792	129,413	104,317
Salaries of Justices of High Court ..	18,500	15,500	17,433	18,879	21,600
High Court expenses	15,615	14,851	16,740	17,162	19,014
Court of Conciliation and Arbitration..	24,046	43,091	50,334	52,669	60,070
Public Service Arbitrator's Office ..	5,919	3,573	4,586	4,242	4,983
Rent, repairs, etc.	15,131	24,371	25,779	26,025	36,277
Patents, Trade Marks, etc.	71,126	48,171	54,016	67,897	97,642
Investigation Branch	16,219	33,182	35,804	35,927	52,125
Bankruptcy	44,551	41,937	39,223	39,679	41,449
Reporting Branch	13,922	24,097	24,886	24,942	25,058
Legal Service Bureau	..	..	..	..	36,867
Miscellaneous	9,127	10,184	12,166	14,060	26,910
Total	281,497	386,749	433,646	472,604	569,234

(*h*) *Department of the Interior.* With the formation of the new departments of Works (later expanded to include Housing) in February, 1945, and Immigration in July, 1945, the administration of Commonwealth Public Works and Immigration was transferred to the new departments. The costs relating to these activities for the years 1943–44 to 1946–47 are shown under the new departments. The Commonwealth Railways and the Northern and Australian Capital Territories, which are administered by the Department of the Interior, are for convenience included respectively under Railways (*w*) and Territories (*x*) below. Expenditure in connexion with the Electoral Office, which is administered by the Department of the Interior, is included under Parliament, in (*c*) above.

Particulars of the expenditure for the years 1938–39 and 1943–44 to 1946–47 on other services under the control of this Department are as follows :—

EXPENDITURE : DEPARTMENT OF THE INTERIOR.(*a*)

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
Salaries, Contingencies and Miscellaneous—	£	£	£	£	£
Administrative ..	380,550	(*b*)122,706	(*b*)148,300	(*b*)187,056	285,073
Meteorological Bureau	80,107	(*c*)	(*c*)	(*c*)	60,578
Solar Observatory ..	6,816	9,177	15,090	17,804	22,887
Forestry Branch ..	10,436	9,670	11,803	19,407	28,709
Rent, repairs and maintenance	17,618	18,300	19,400	27,604	89,302
Pensions, Superannuation and Retiring Allowances	20,567	16,924	18,203	21,074	21,761
Interest	690,061	541,962	549,994	582,842	484,046
Sinking Fund	69,237	88,367	92,785	97,424	102,295
Total	1,275,392	807,106	855,575	953,211	1,094,651

(*a*) Excludes Territories, Railways and Electoral Office. (*b*) Additional expenditure occasioned by the war was provided under War (1939–45) Services. (*c*) Provided under Departments of Air and Civil Aviation.

(*i*) *Department of Works and Housing.* In February, 1945, the Department of Works was formed to take over Commonwealth works from the Department of the Interior The functions of this department were expanded in July, 1945 to include Housing, which had previously been controlled by the Department of Post-war Reconstruction. Details of expenditure for the years 1942–43 to 1946–47 are shown in the following table :—

EXPENDITURE : DEPARTMENT OF WORKS AND HOUSING.

Details.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Administrative—Salaries and general expenses ..	(a) 41,602	(a) 34,953	(a) 42,030	(a)102,000	1,500,217
Pensions, Superannuation and Retiring Allowances	5,478	5,785	5,180	6,049	8,102
Rent, repairs and maintenance	1,700	1,700	1,700	787	92,525
Total ..	48,780	42,438	48,910	108,836	1,600,844

(a) Additional expenditure occasioned by the war was provided under War (1939–45) Services.

(j) *Department of Civil Aviation.* Particulars of expenditure of the Department of Civil Aviation for the years 1938–39 and 1943–44 to 1946–47 are as follows :—

EXPENDITURE : DEPARTMENT OF CIVIL AVIATION.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Administrative—Salaries and general expenses	89,946	235,054	313,222	473,021	808,617
Development and maintenance of Civil Aviation	162,232	..	1,095	110,658	202,132
Meteorological Services ..	..	61,000	61,000	61,000	149,330
Flying Boat Bases	55,919	37,722	24,285	25,117	38,444
Overseas Air Services	..	3,009	12,457	42,020	10,000
Rent, repairs and maintenance ..	8,428	12,953	16,452	16,493	40,531
Interest and Sinking Fund ..	11,625	9,853	10,020	10,599	9,258
Total	328,150	359,591	438,531	738,908	1,258,312

(k) *Department of Trade and Customs.* Under this head has been included the expenditure of all the sub-departments under the control of the Minister for Trade and Customs, in addition to the amounts payable as bounties and the expenses in connexion therewith. Particulars for the five years 1938–39 and 1943–44 to 1946–47 are given in the following table :—

EXPENDITURE : DEPARTMENT OF TRADE AND CUSTOMS.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Central Office	70,298	(a)53,149	(a)61,769	(a)77,558	126,667
Tariff Board	13,252	9,864	10,854	10,373	13,236
Film Censorship	4,466	4,948	4,778	6,348	5,273
Commercial Branch	..	..	..	..	105,566
Customs—States	621,425	a624,346	a670,549	a743,657	932,316
Audit (proportion)	11,786	16,691	17,237	19,920	20,765
Pensions and Superannuation ..	45,063	49,930	49,457	49,460	51,571
Rent, repairs, etc.	7,373	8,508	7,885	9,114	32,292
Bounties and Subsidies ..	225,636	6,098	13,813	22,334	29,320
Interest and Sinking Fund ..	34,321	29,271	29,917	31,642	27,735
Remissions of duty on materials for Commonwealth Government ship construction	26,702	5,244	1,387	89	..
Other remissions of duty ..	2,066	7,452	5,811	10,079	46,195
Miscellaneous	1,736	..	..	3,172	(b)55,994
Total	1,064,124	815,501	873,457	983,746	1,446,930

(a) Additional expenditure occasioned by the war was provided under War (1939–45) Services
(b) Includes £55,000 compensation under Motor Manufacture Repeal Act 1945

(*l*) *Department of Health.* Details of expenditure for the five years 1938–39 and 1943–44 to 1946–47 are as follows :—

EXPENDITURE : DEPARTMENT OF HEALTH.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Administrative	135,506	150,554	157,227	160,149	196,369
Pharmaceutical Services ..	..	..	5,356	13,830	10,614
Interest and Sinking Fund ..	23,661	20,901	21,293	22,291	20,132
Rent and repairs	14,102	12,840	12,870	16,630	37,607
Pensions and Superannuation ..	2,870	4,211	4,204	5,006	5,261
Subsidy, Cattle Tick Control ..	69,450	53,325	53,325	53,325	53,325
Medical Research	30,000	20,000	20,000	40,000	32,000
Nutrition—Publicity and surveys	2,969	9,621	9,893	6,655	3,274
X-ray and Radium Laboratory ..	3,492	4,429	4,501	6,489	5,827
Acoustic Laboratory	..	..	..	..	4,682
National Health Campaign ..	5,000	20,400	20,400	23,000	20,000
Council for National Fitness ..	371	72,500	72,500	72,500	72,500
Maternal and Infant Hygiene ..	1,000	1,250	1,250	..	..
Aerial Medical Services subsidy ..	5,000	7,500	7,500	7,500	7,500
Miscellaneous	(*a*)44,734	1,795	2,283	1,413	4,301
Total	338,155	379,326	392,602	428,788	473,392

(*a*) Includes reserve of essential drugs and medical equipment, £39,430.

(*m*) *Department of Commerce and Agriculture.* Particulars of the expenditure of the Department of Commerce and Agriculture for the five years 1938–39 and 1943–44 to 1946–47 are given below :—

EXPENDITURE : DEPARTMENT OF COMMERCE AND AGRICULTURE.(*a*)

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Administrative	58,218	(*b*)75,121	(*b*)57,689	(*b*)75,420	150,726
Administration of Commerce (Trade Descriptions) Act ..	174,876	250,112	278,245	279,447	297,483
Division of Agricultural Economics	..	..	..	..	18,316
Australian National Publicity Association	20,000	..	..	..	..
Oversea trade publicity ..	47,016	..	..	771	12,267
Commercial intelligence service abroad	47,248	33,852	41,300	51,365	110,247
Wool publicity and research ..	73,816	85,335	74,858	..	..
Wool use promotion	..	..	..	344,538	229,957
Fruit bounties	10,462	..	..	..	..
Herd testing	..	..	..	..	10,827
Research, experimental, investigation and development work ..	..	..	..	1,485	8,485
Agricultural machinery control ..	..	..	..	..	12,624
Wheat Industry Stabilization Board	..	..	..	..	28,094
Emergency transport of wheat ..	..	..	..	..	1,500,468
Wheat contract with New Zealand	..	..	..	..	876,962
Rent, repairs, maintenance, etc...	13,081	6,808	2,741	8,540	20,379
Pensions and Retiring Allowances	12,959	14,255	10,877	10,577	9,868
Interest	198,599	246,486	240,906	248,970	224,716
Sinking Fund	245,404	318,880	333,809	350,500	57,633
All Other	(*c*) 92,416	2,812	2,298	3,299	36,391
Total	994,095	1,033,661	1,042,723	1,374,912	3,605,443

(*a*) Excludes Drought Relief and other assistance to Primary Producers. (*b*) Additional expenditure occasioned by the war was provided under War (1939–45) Services. (*c*) Includes representation at New York World Fair, £39,780, and San Francisco Exhibition, £21,335.

(*n*) *Department of Social Services.* This Department, constituted during 1940–41, administers Age and Invalid Pensions, Maternity Allowances, Child Endowment, Widows' Pensions, and Unemployment and Sickness Benefits. Particulars of administrative expenditure during the five years 1938–39 and 1943–44 to 1946–47 are as follows :—

EXPENDITURE : DEPARTMENT OF SOCIAL SERVICES.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Administrative	..	10,116	11,069	13,788	23,783
Child Endowment Section ..	..	134,400	140,834	134,130	150,884
Age and Invalid Pensions and Maternity Allowances Section..	138,634	210,796	211,434	236,740	279,504
Widows' Pensions Section ..	..	27,384	27,016	25,798	27,673
Unemployment and Sickness Benefits Section	..	..	10,548	189,567	217,012
Miscellaneous	186,100	29,443	42,359	65,904	77,273
Total	324,734	412,139	443,260	665,927	776,129

Expenditure from Consolidated Revenue and National Welfare Funds on Social Services, during the five years 1938–39 and 1943–44 to 1946–47 including Hospital and Tuberculosis Benefits administered by the Department of Health, is shown in the following table :—

EXPENDITURE ON SOCIAL SERVICES.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Age and Invalid Pensions ..	15,991,782	21,699,100	21,701,127	26,962,420	29,416,673
Funeral Benefits	..	105,336	163,992	184,478	209,349
Widows' Pensions	..	2,800,702	2,965,446	3,247,334	3,366,288
Maternity Allowances	436,614	2,287,000	2,542,801	2,492,495	3,026,459
Child Endowment	..	12,256,976	12,036,248	18,019,178	19,862,933
Unemployment and Sickness Benefits	..	..	..	1,144,412	1,650,125
Hospital Benefits	..	..	..	1,111,292	4,380,296
Tuberculosis Benefits	..	..	..	..	109,603
Total	16,428,396	39,149,114	39,409,614	53,161,609	62,021,726

(*o*) *Department of Supply and Shipping.* Formed in 1942–43 for the purposes of controlling war-time supplies and shipping, the Department took over the Marine Branch of the Department of Commerce. Expenditure on this branch is shown below. The balance of the expenditure of the Department is shown under the Defence, War (1939–45) Services and Post-war Charges.

EXPENDITURE : DEPARTMENT OF SUPPLY AND SHIPPING.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Marine Branch—Salaries and general expenses	208,129	264,702	265,737	270,018	320,957
Overhaul and repair of Departmental vessels	5,305	6,266	..	..	..
Colonial Light Duties	1,398	830	842	1,335	854
Rent, repair and maintenance of buildings	..	3,375	6,286	8,447	10,154
Total	214,832	275,173	272,865	279,800	331,965

(*p*) *Department of External Territories.* This Department was set up on June, 1941 to administer the Commonwealth External Territories of Papua, New Guinea, Norfolk Island and Nauru. Expenditure of the Department for the years 1942–43 to 1946–47 is shown hereunder. Particulars of expenditure on Territories is given in para. (*x*) following :—

EXPENDITURE : DEPARTMENT OF EXTERNAL TERRITORIES.

Details.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Administration—Salaries and general expenses	14,264	14,666	23,374	32,165	42,338
Shipping and mail services to the Pacific Islands	10,313	4,929	12,000	11,954	12,367
Superannuation	..	12	..	152	183
Rent, repair and maintenance of buildings	..	..	..	943	909
Total	24,577	19,607	35,374	45,214	55,797

(*q*) *Department of Immigration.* This Department was formed in July, 1945 to administer matters relating to Immigration, Naturalization, etc. Prior to the formation of this Department, this work was carried out by a section of the Department of the Interior. Expenditure for the years 1942–43 to 1946–47 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF IMMIGRATION.

Details.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Administration—Salaries and general expenses	27,192	31,197	32,420	61,120	128,268
British migration	..	..	..	..	32,772
Miscellaneous	..	..	..	11,431	15,584
Superannuation	..	..	..	..	17
Rent, repair and maintenance of buildings	..	..	..	..	6,578
Total	27,192	31,197	32,420	72,551	183,219

(*r*) *Department of Labour and National Service.* This Department was set up during the 1939–45 War for the purpose of mobilizing the nation's man-power and to deal with matters affecting industrial relations, welfare and training, and war housing. For details of the existing functions of the Department see Chapter III.—General Government, § 4.

Expenditure during 1946–47 amounted to £1,127,430. Prior to 1946–47, expenditure on this Department was included under Defence, War (1939–45) Services and Post-war Charges.

(s) *Department of Transport.* This Department was set up in 1941–42 to control, regulate and direct all land transport services for the carriage of goods and passenger, within the Commonwealth. Expenditure by this Department during 1946–47 was £57,422, expenditure in previous years being provided under Defence, War (1939–45) Services and Post-war Charges. For details of the existing functions of the Departments see Chapter III.—General Government, § 4.

(t) *Department of Information.* This Department was set up during the 1939–45 War, its functions relating, *inter alia*, to the direction and control of the publication of information on the war, and to publicity censorship. For existing functions see Chapter III.—General Government, § 4. Expenditure of this Department during 1946–47 was £342,280, expenditure in previous years being provided under Defence, War (1939–45) Services and Post-war Charges.

(u) *Department of Post-war Reconstruction.* The Department of Post-war Reconstruction was set up during the 1939–45 War to prepare for the conversion from war to peace-time activities. It administers the Commonwealth Reconstruction Training Scheme and the Office of Education. For further information regarding its functions see Chapter III.—General Government, § 4. Expenditure during 1946–47 was as follows:—administrative and general expenses, £216,301 ; Office of Education, £105,539 ; financial assistance to university students, £204,488 , rent, repair and maintenance of buildings, £33,388 ; total, £559,716. Expenditure prior to 1946–47 was included under Defence, War (1939–45) Services and Post-war Charges.

(v) *Postmaster-General's Department.* Details of the expenditure of this department for the five years 1938–39 and 1943–44 to 1946–47 are given in the following table :—

EXPENDITURE : POSTMASTER-GENERAL'S DEPARTMENT.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Salaries, stores and materials, mail engineering services, etc. ..	11,563,510	18,471,039	19,920,531	20,841,144	22,617,000
Public Works Staff—Salaries, etc.	60,000	60,000	60,000	60,000	68,000
Audit (proportion)	11,660	13,000	13,000	13,000	13,000
Pensions and Retiring Allowances	75,113	46,646	38,291	34,512	30,329
Superannuation	316,747	379,080	379,522	397,615	428,445
Rents, repairs, etc.	114,183	149,395	156,035	180,440	223,310
A.R.P. Works at Postal Establishments	..	25,708	51,048	17,777	..
Interest	1,398,690	1,330,567	1,295,668	1,110,915	1,072,607
Sinking Fund	1,128,933	1,528,295	1,604,792	1,684,980	1,769,210
Exchange	359,397	477,847	474,576	434,615	428,827
Loans, Redemption and Conversion expenses	..	..	..	..	104,973
Total	15,028,233	22,481,577	23,993,463	24,774,998	26,755,701

Further details of expenditure to 1945–46 on account of the Postmaster-General's Department appear in Chapter V. " Transport and Communication " (part I., Posts, Telegraphs and Telephones).

(*w*) *Railways.* In April, 1932 the administration of Commonwealth Railways was placed under the Department of the Interior. The expenditure on railways for the five years 1938–39 and 1943–44 to 1946–47 is shown below :—

EXPENDITURE : COMMONWEALTH RAILWAYS.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Working expenses—					
Trans-Australian	493,463	871,730	882,464	776,386	740,556
North Australia	55,186	479,190	517,273	212,150	52,222
Central Australia	214,374	1,028,059	784,221	591,790	439,252
Australian Capital Territory ..	7,365	13,754	12,438	12,158	13,195
Interest	392,194	368,675	359,907	344,171	341,189
Sinking Fund..	75,230	95,735	100,474	105,295	110,575
Exchange	62,674	83,951	83,894	83,697	80,516
Contribution to South Australia (Port Augusta–Port Pirie Railway)	20,000	20,000	20,000	20,000	20,000
Superannuation	13,467	16,210	17,426	17,215	19,381
Miscellaneous	17,088	91,382	16,699	26,400	a104,286
Total	1,351,041	3,068,686	2,794,796	2,189,262	1,921,172

(*a*) Includes loans, redemption and conversion expenses, £54,648.

Additional details of the financial operations of the Commonwealth Railways to 1945–46 are given in Chapter V. " Transport and Communication " (part B, Railways).

(*x*) *Territories.* The following table shows the expenditure on account of territorial services for the five years 1938–39 and 1943–44 to 1946–47. The internal territories are administered by the Department of the Interior, and the Department of External Territories controls the external territories. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the *Finance Bulletin* No. 38, issued by this Bureau.

EXPENDITURE : TERRITORIES.

Details.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
Internal—					
Australian Capital (*a*) ..	637,228	698,290	736,898	831,289	941,275
Northern (*a*)	402,899	301,434	294,800	365,990	819,613
External—					
Papua	48,830	4,692	4,609	6,654	1,526,342
New Guinea	5,532	2,135	2,139		
Norfolk Island	5,471	4,073	4,074	4,074	4,075
Total	1,099,960	1,010,624	1,042,520	1,208,007	3,291,305

(*a*) Excludes Railways, see para. (*w*.)

(iii) *New Works.* The expenditure on additions, new works, etc., during the five years 1938–39 and 1943–44 to 1946–47 was as follows :—1938–39, £6,565,268 (excluding £3,494,733 provided from excess receipts for Defence equipment) ; 1943–44, £4,677,278 ; 1944–45, £5,705,351 ; 1945–46, £6,659,952 ; and 1946–47, £15,157,463. Particulars for the last four years exclude expenditure in connexion with Defence, War (1939–45) Services and Post-war Charges.

(iv) *Defence, War and Repatriation Services.* Full details concerning the expenditure from Consolidated Revenue upon War and Repatriation (1914–18) Services and Defence, War (1939–45) Services and Post-war Charges will be found in §§ 5 and 6, pages 651–5

Division IV.—Payments to or for the States.

1. **Introductory.**—In some previous issues of the Official Year Book particulars were given of the obligations imposed on the Commonwealth by the Constitution Act with reference to the payments to be made to the States, and the following statement includes a brief outline of the principal financial provisions of the Constitution in regard to the distribution of revenue received by the Commonwealth. Details of payments to the States under other agreements are included in more detail.

2. **Uniform Customs Duties.**—Prior to Federation, State revenues were largely derived from Customs and Excise Duties and as the Commonwealth Constitution (Sections 86 and 90) transferred exclusively to the Commonwealth this source of revenue it was essential that the Constitution should provide adequate compensation for this loss to the States. Section 88 directed that uniform duties of customs must be imposed within two years after the establishment of the Commonwealth. This section was complied with on 8th October, 1901, by the introduction of the first Customs Tariff Bill. Section 95 of the Constitution, however, authorized the Western Australian Government, for a period of five years after the imposition of the uniform customs duties, to impose limited customs duties on goods passing into that State and not originally imported from beyond the limits of the Commonwealth, such duties to be collected by the Commonwealth.

3. **Distribution of Commonwealth Revenue.**—Broadly, the requirements of the Commonwealth Constitution in regard to the financial relationship between the Commonwealth and the States may be divided into three phases covering definite periods.

(*a*) 1901 *to* 1910. This period was covered by Section 87 (known as the "Braddon Clause") which provided that:—

> "During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.
>
> The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on the debts of the several States taken over by the Commonwealth."

The scheme outlined in the Constitution for determining the amount to be paid to the several States is contained in Sections 89 and 93, the former of which relates to the period prior to the imposition of uniform duties of customs (as provided in Section 88), the latter to the first five years after the imposition of such duties and thereafter until Parliament otherwise provides. The principle involved was that of crediting each State with the Commonwealth revenue collected in respect of that State, and of debiting it with the expenditure incurred on its behalf in connexion with transferred departments, as well as its share on a *per capita* basis of the "new" expenditure of the Commonwealth. On this account the method of allocation provided by the Constitution became very generally known as the "book-keeping system". As the imposition of uniform duties of customs and excise throughout the Commonwealth took place on 9th October, 1901, the five years provided for in Section 93 expired on 8th October, 1906, and consequently the "book-keeping system" could then be changed at any time by the Commonwealth Parliament.

Section 93 provided that the duties of customs chargeable on goods imported into and duties of excise paid on goods produced or manufactured in one State and consumed in another should be credited to the consuming State. The balance in favour of any State was paid monthly by the Commonwealth.

The Surplus Revenue Act 1908 continued the "book-keeping system" but provided that any excess receipts over expenditure should be distributed monthly to each State in proportion to their respective populations. This Act more clearly defined "transferred" and "new" expenditure.

(*b*) 1911 *to* 1927 (*Surplus Revenue Acts*). The provisions of Section 87 of the Constitution were terminated by the passing of the Surplus Revenue Act 1910 which provided for the following scheme of payments to operate from 1st July, 1910 :—

- (i) the Commonwealth to pay by monthly instalments or apply to the payment of interest on debts of the States taken over by the Commonwealth an annual sum amounting to twenty-five shillings per head of the number of people of the State;
- (ii) in addition to the payments above, all surplus revenue (if any) to be paid to the States in proportion to the number of people; and
- (iii) a special payment to be made to Western Australia in monthly instalments of an annual sum of £250,000 in the first year, thereafter progressively diminishing by £10,000 each year. One half of the payments so made to be debited to all of the States (including Western Australia) on a population basis and the amount so debited to be deducted from the amount otherwise payable to each State.

After 1920 and until 1927 the provisions of the several Surplus Revenue Acts continued to govern the payments by the Commonwealth to the States.

(*c*) 1928 *to date* (*Financial Agreement Act*). An Amendment to the Constitution embodied in Section 105A gave effect to the powers conferred on the Commonwealth in Section 105. This amendment included provisions for :—

- (i) taking over the debts of the several States by the Commonwealth;
- (ii) the payment by the Commonwealth of a fixed annual sum in respect of the interest on such debts and for certain sinking fund contributions;
- (iii) the indemnification of the Commonwealth by the States in respect of debts taken over from the States;
- (iv) the borrowing of money by the States or by the Commonwealth or by the Commonwealth for the States; and
- (v) certain other matters connected with the management, consolidation, renewal, conversion and redemption of such debts.

4. **Special Grants.**—The Constitution provides in Section 96 for the granting of special financial assistance to the States. Reference has already been made to the special grant to Western Australia in the Surplus Revenue Act 1910. This State has continued to receive financial assistance each year since 1910–11. In 1912 a grant under similar conditions was made to Tasmania, the amount payable in the first year, 1912–13, being £95,000, which was to be progressively reduced by £10,000 in each successive year. The Tasmania Grant Act 1913 provided for an addition to this grant, bringing the amount payable to £85,000 per annum to the year 1921–22, after which annual grants of varying magnitude were made.

South Australia received £360,000 in 1929–30 and further grants in each successive year.

Other direct grants to the States from consolidated revenue include contributions towards the payment of interest and sinking fund on loans expended by Local Government authorities on public works. Grants which have been made from loan fund are indicated in the statement of loan expenditure on page 640.

From the accumulated excess receipts since 1931–32, special assistance to the States was provided as follows :—

State.	1934–35.	1935–36.	1936–37.
	£	£	£
New South Wales	786,000	205,000	197,000
Victoria	550,000	140,000	137,000
Queensland	286,000	75,000	72,000
South Australia	176,000	45,000	44,000
Western Australia	133,000	35,000	33,000
Tasmania	69,000	..	17,000
Total	2,000,000	500,000	500,000

5. **Commonwealth Grants Commission.**—In 1933 the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications were received from South Australia, Western Australia and Tasmania during each year from 1933 and the recommendations of the Commission in respect of the years 1938–39 and 1944–45 to 1947–48 were as follows :—

State	Grant Recommended.				
	1938–39.	1944–45. (a)	1945–46. (a)	1946–47. (b)	1947–48 (b)
	£	£	£	£	£
South Australia	1,040,000	1,200,000	1,400,000	2,000,000	2,318,000
Western Australia	570,000	904,000	950,000	1,873,000	2,977,000
Tasmania	410,000	742,000	646,000	875,000	747,000
Total	2,020,000	2,846,000	2,996,000	4,748,000	6,042,000

(a) Excludes Special Grants recommended under Section 6 (2) of the State Grants (Income Tax Reimbursement) Act 1942 : 1944–45, South Australia, £553,172 ; 1945–46, South Australia, £1,101,365. Western Australia, £912,559 and Tasmania. £118,996, total £2,132,920. (b) Includes additional grants recommended : 1946–47. South Australia, £400,000, Western Australia, £628,000 and Tasmania, £50,000, total, £1,078,000 ; 1947–48, Western Australia, £1,000,000.

6. **States Grants (Income and Entertainments Tax Reimbursement) Acts.**—(i) *States Grants (Income Tax Reimbursement) Act.* As compensation to the States for vacating the income tax field to the Commonwealth Government, the States Grants (Income Tax Reimbursement) Act 1942 provided for the payment to the States of the following amounts, less amounts equal to any arrears of State Income Tax collected during each year that the Act remained in operation :—

	£
New South Wales	15,356,000
Victoria	6,517,000
Queensland	5,821,000
South Australia	2,361,000
Western Australia	2,546,000
Tasmania	888,000
Total	33,489,000

Amounts equal to the arrears collected were to be paid, with interest at a rate not less than 3 per cent., immediately prior to the expiration of the Act.

In section 6 of the Act provision was made for the Treasurer of any State to inform the Commonwealth Grants Commission if he considered that the payments made under the Act were insufficient to meet his revenue requirements. The Commission, after inquiry into the matter, was to advise the Treasurer as to the justice of granting additional assistance. The Treasurer of Tasmania availed himself of this provision to apply for an increase of the Income Tax Reimbursement Grant for the years 1942–43, 1943–44 and 1944–45, but in each case the Commonwealth Grants Commission did not consider that an additional grant was just. Following an application in 1944–45 by the Treasurer of South Australia, an additional grant of £553,172 was recommended by the Commonwealth Grants Commission. In 1945–46 three States applied for additional financial assistance and the following grants were recommended :—South Australia, £1,101,365 ; Western Australia, £912,559 ; and Tasmania, £118,996 ; total £2,132,920.

(ii) *States Grants (Tax Reimbursement) Act* 1946. The States Grants (Income Tax Reimbursement) Act 1942 came into operation on 1st July, 1942, and was repealed by the State Grants (Tax Reimbursement) Act 1946.

The States Grants (Tax Reimbursement) Act 1946 revised the basis of determining the reimbursement grants for 1946–47 and subsequent years. This Act provided for the following reimbursement grants to be paid to the States.

(*a*) 1946–47 and 1947–48—	£
New South Wales	16,477,000
Victoria	8,860,000
Queensland	6,601,000
South Australia	3,458,000
Western Australia	3,384,000
Tasmania	1,220,000
Total	40,000,000

(*b*) 1948–49 and subsequent years.—An amount is to be determined by increasing the aggregate grants paid in 1947–48 (£40,000,000) by the same proportion as the aggregate population of the six States at the beginning of the financial year increases over the aggregate population of the six States at 1st July, 1947. This amount is to be further increased by a percentage equal to half the percentage increase in average wages per person employed in the financial year preceding the year in which the reimbursement grants are to be paid over the average wages per person employed in 1946–47. The amount so determined will be the aggregate of the reimbursement grants and is to be distributed to the States in the following proportions :—

(i) 1948–49 to 1956–57—The weighted mean of—

(*a*) the proportion indicated by the " adjusted " population* for each State, and

(*b*) the proportions indicated by the distribution of the aggregate reimbursement grant in 1946–47 and 1947–48,

giving the latter a weight of 9/10 in 1948–49, 8/10 in 1949–50 and thus decreasing each year to 1/10 in 1956–57.

(ii) 1957–58 and subsequent years—the proportion indicated by the " adjusted " population for each State.

It is provided that, if the application of the foregoing formula for distribution of the aggregate grants causes the amount of the reimbursement grant for any State to fall below the grant for 1946–47, the grant payable will be the same as that for 1946–47 and the balance of the aggregate grant is to be distributed between the remaining States in the proportions above.

An amount equal to arrears of State income taxes collected by the States in any year is to be deducted from the reimbursement grants for that year. The aggregate amount so deducted less any refunds of State income taxes made by the Commonwealth is to be repaid in the event of uniform taxation ceasing to operate. This amount bore interest at 3 per cent. up to 30th June, 1946, but thereafter, under the new arrangement, will bear no interest.

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* In the "adjusted" population allowances are made for differences in the proportion of school children in the population and the density of the population in each State.

The provisions relating to additional grants in the State Grants (Income Tax Reimbursement) Act 1942 were repealed.

The payment of the tax reimbursement grant in any year to any State is subject to the condition that that State does not impose a tax on incomes in that year.

Under the State Grants (Tax Reimbursement) Act 1947 an additional grant of £5,000,000 was made for the year 1947–48 and provision was made to increase the aggregate grant for subsequent years to a minimum of £45,000,000.

The reimbursement grants provided in the State Grants (Tax Reimbursement) Act 1946–47 are intended to replace the grants previously made on account of both Income and Entertainments taxes.

(iii) *States Grants (Entertainments Tax Reimbursement) Act.* The following amounts were paid to the States by the Commonwealth for the years 1942–43 to 1945–46, following the withdrawal of the States from the entertainments tax field :—

ENTERTAINMENTS TAX REIMBURSEMENT GRANTS.

State.	1942–43.	Each year 1943–44 to 1945–46.
	£	£
New South Wales	120,623	160,830
Victoria	279,944	373,259
South Australia	72,782	97,043
Western Australia	73,640	98,186
Tasmania	27,352	36,469
Total	574,341	765,787

No compensation was payable in respect of Queensland because a State entertainment tax was not levied in that State.

The Act ceased to operate after 30th June, 1946, when the reimbursement grant on account of entertainments tax was included with the tax reimbursement grant. Although the Commonwealth will continue to collect an entertainments tax, payment of this grant is not conditional on any State not imposing an entertainments tax.

7. **Grants for Road Construction.**—(i) *Main Roads Development Acts.* Grants amounting in the aggregate to £1,750,000 were made to the States in 1922–23, 1924–25 and 1925–26 for the purpose of reconditioning certain main roads. Of this amount £1,500,000 was granted on the condition that the States spent an equivalent amount.

(ii) *Federal Aid Roads.* The Federal Aid Roads Act 1926 made provision for the construction and re-construction of roads in the several States out of moneys provided by the Commonwealth and States respectively. The original arrangement provided for a grant by the Commonwealth of £2,000,000 per annum for ten years from 1st July, 1926. The allocation to the States was based on three-fifths according to population and two-fifths according to area.

Expenditure was made in the proportion of 15s. by the States to £1 by the Commonwealth. The original agreement was varied in certain respects, the most important of which operated from 1st July, 1931, when, in lieu of the £2,000,000 per annum, the Commonwealth agreed to contribute an amount equivalent to 2½d. per gallon customs duty, and 1½d. per gallon excise duty on petrol entered for home consumption during each year, and the States were not required to make any contribution as formerly agreed upon.

The 1926 agreement, which was originally intended to remain in operation for ten years, was continued until 30th June, 1937, when a new agreement was entered into. The latter provided for the continuation of the Federal Aid Roads Agreement for a further period of ten years from 1st July, 1937, increased the amount payable to the States to 3d. a gallon customs duty and 2d. a gallon excise on petroleum and shale products (except benzol, on which the excise is only 1½d.), and stipulated that the proceeds of the extra ½d. per gallon should be expended on the construction, reconstruction, maintenance or repair of roads, or other works connected with transport. The allocation of the amount payable was in the proportion of 5 per cent. to Tasmania and the remaining 95 per cent. to the other States on the basis of three-fifths according to the population at 30th June, 1936, and two-fifths according to area. At the request of the Commonwealth Government the States will, up to a limit of one-twelfth of this additional amount, attend to the maintenance or repair of roads of approach to or adjoining Commonwealth properties. A further variation was the reduction from 3 to 2½ per cent. of the sinking fund contribution of the States on loan moneys provided by them between 1926 and 1931.

(iii) *Commonwealth Aid Roads and Works.* The Federal Aid Roads and Works Agreement expired on 30th June, 1947, and was replaced by the Commonwealth Aid Roads and Works Act 1947, which provided for the following grants to be made to the States for the three years commencing on 1st July, 1947 :—

(*a*) An amount equal to 3d. a gallon customs duty and 2d. a gallon excise duty on petroleum and shale products (except benzol, on which the proportion of excise duty is 1½d. a gallon) entered for home consumption. Petroleum and shale products used in civil aircraft are to be excluded.

(*b*) £1,000,000 in each year.

These grants are to be distributed to the States in the following proportion :—

(1) 5 per cent. to Tasmania,

(2) 95 per cent. to be distributed between the remaining States as to three-fifths according to population at 30th June, 1947, and two-fifths according to area.

The amount of the grant received by the States under (*a*) above is to be expended on the construction, reconstruction, maintenance and repair of roads and (not exceeding one-sixth) on other works connected with transport. The grant under (*b*) above is to be expended on construction and maintenance of roads in sparsely populated areas, timber country and rural areas or on purchase of road-making plant for use in those areas.

The Act also provides £500,000 per annum to be expended by the Commonwealth on strategic roads and roads of access to Commonwealth property and £100,000 for the promotion of road safety practices.

8. **Amount paid.**—(i) 1901 *to* 1947. The following table shows particulars of the amounts paid to each of the States since Federation, divided into three periods, with separate details for Special and Roads Grants. Special Commonwealth grants for the relief of primary producers are not included in this table. Details of these grants will be found in Chapter XX. " Agricultural Production ".

PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES TO 30th JUNE, 1947.(*a*)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1900–01 to 1909–10 (*b*) ..	27,606	19,815	8,895	6,148	8,727	2,602	73,793
1910–11 to 1926–27 (*c*) ..	41,634	31,341	15,184	9,925	6,899	4,367	109,350
1927–28 to 1946–47 (*d*) ..	69,321	48,002	25,634	17,398	12,470	6,119	178,950
Special Grants (*e*) ..	..	..	..	20,595	16,347	11,064	48,006
Grants—							
Income Tax Reimbursement (*f*)	55,419	24,331	22,212	9,037	9,492	3,409	123,900
Income Tax Reimbursement—Special Grants(*f*)	..	..	..	1,654	913	119	2,686
Entertainments Tax Reimbursement (*g*) ..	603	1,399	..	364	368	138	2,872
Tax Reimbursement (*h*)..	16,128	8,771	6,565	3,435	3,350	1,215	39,464
Non-recurring Grants from Excess Receipts, 1934–35 to 1936–37	1,188	827	433	265	201	86	3,000
Special Assistance (*i*) ..	944	916	375	220	322	128	2,905
Grants for Road Construction, 1922–23 to 1946–47 (*j*)	15,849	10,329	11,055	6,546	11,192	2,913	57,884
Total	228,692	145,731	90,353	75,587	70,287	32,160	642,810

(*a*) Includes non-recurring grants from excess receipts, but excludes amounts provided for relief of wheat-growers and other primary producers and other payments for medical research, etc. (*b*) Under Section 87 of the Commonwealth Constitution. (*c*) Under the several Surplus Revenue Acts. (*d*) Under Financial Agreement Act 1928–1944. (*e*) Under various State Grants Acts. (*f*) Under States Grants (Income Tax Reimbursement) Act 1942. (*g*) Under States Grants (Entertainments Tax Reimbursement) Act 1942. (*h*) Under States Grants (Tax Reimbursement) Act, 1946–1947. (*i*) Unemployment Relief, Metalliferous Mining, Forestry, Local Public Works, etc. (*j*) Under Federal Aid Roads and Main Roads Development Acts.

(ii) 1946–47. For the year ended 30th June, 1947, the payments made to or for each State are shown below :—

PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES, 1946–47.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£
Interest on States' Debts ..	2,917,411	2,127,159	1,096,235	703,816	473,432	266,859	7,584.912
Sinking Fund on States' Debts (b)	648,184	321,245	224,412	198,663	188,838	54,778	1,636,120
Special Grants	..	..	..	2,000,000	1,873,000	875,000	4,748,000
Tax Reimbursement Grants	16,127,942	8,770,774	6,564,625	3,435,254	3,350,355	1,214,698	39,463,848
Income Tax Reimbursements—Special Grants (c)	..	..	..	1,101,365	912,559	118,996	2,132,920
Federal Aid Roads and Works (d)	1,350,286	840,926	917,810	533,387	922,616	240,265	4,805,290
Contributions—							
Interest on Loans for Drought Relief ..	6,279	3,439	55	330	..	..	10,103
Port Augusta–Port Pirie Railway Agreement ..	..	..	..	20,000	..	..	20,000
Total	21,050,102	12,063,543	8,803,137	7,992,815	7,721,000	2,770,596	60,401,193

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Under Section 6 (2) of the State Grants (Income Tax Reimbursement) Act 1942—to assist State finances, 1945–46. (d) Paid to Trust Fund.

§ 3. Trust Funds.

The Trust Fund balances at 30th June, 1947 amounted to £171,134,502, as compared with £132,273,483 at 30th June, 1946.

§ 4. Commonwealth Loan Funds and Public Debt.

1. **General.**—Although it was not until 1915 that the Commonwealth Government came into the loan market as a borrower, there had previously existed a Commonwealth Public Debt which included several items such as the balance of the debt taken over from South Australia and the amount owing to the States for transferred properties. In view of the large expansion of the Public Debt, and its present importance in Commonwealth public finance, the different items are treated *seriatim* in the following paragraphs.

2. **Loans taken over from South Australia.**—The first portions of the debt were contracted at the beginning of 1911, when the Commonwealth assumed responsibility for the payment of interest on transferred properties (further dealt with in par. 4 below) and for the administration and the liabilities of the Northern Territory and the Port Augusta–Oodnadatta Railway. At 30th June, 1911, the debt on account of the former was £3,657,836, and on account of the latter, £2,274,486—a total of £5,932,322. The remaining indebtedness was redeemed during 1940–41.

3. **Loan Fund Expenditure.**—Up to the year 1911 the Commonwealth Government had met its public works expenditure out of revenue. In that year, however, in view of the prospective heavy cost of the Trans-Australian Railway and the Australian Capital Territory, a Loan Fund similar to those of the States was established. The initiation of this fund was greatly assisted by the fact that the Treasury at that time held a large quantity of gold, principally on behalf of the Australian Notes Account. Up to 30th June, 1914, the money required for loan expenditure was obtained mainly from this source, and 3½ per cent. inscribed stock of an equivalent value was created. During the 1914–18 War, in order to raise considerably larger amounts for war purposes, it was necessary to approach the public market. The money required during this period and thereafter was obtained mainly by the issue of Treasury Bills and other securities in London, New York and Australia. Annual expenditure on works, etc. up to 1919–20 did not exceed £3,000,000. From 1920–21 it rose to almost £9,500,000 in 1926–27 and declined to about £2,000,000 in 1930–31. For the years 1931–32 to 1938–39 expenditure fluctuated between £520,000 and £4,550,000. During the last eight years, owing to the inclusion of expenditure on Defence, War (1939–45) Services and Post-war Charges, the total expenditure from loan has risen considerably.

COMMONWEALTH EXPENDITURE FROM LOAN FUND.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.	Total to 30th June, 1947.
	£	£	£	£	£	£
War (1914–18) and Repatriation Services	..	..	..	..	..	372,989,867
Defence, War (1939–45) Services and Post-war Charges—						
General Services and Works ..	..	377,156,935	266,040,485	152,947,643	37,893,997	1,578,162,778
Additions, New Works, Buildings, etc—						
Defence Buildings, Works, Sites ..	1,912,284	..	..	..	..	8,693,948
Civil Aviation, Buildings and Works	..	..	*Cr.* 1,205	..	..	213,086
Ships, Yards and Docks	*Cr.* 305,351	..	..	..	..	7,863,028
Lighthouses, Works and Services ..	*Cr.* 1,000	*Cr.* 1,000	..	..	..	634,490
River Murray Waters Act ..	..	..	..	..	..	2,105,625
Postmaster-General's Department—						
Telegraph and Telephone Construction	..	..	..	..	..	36,057,558
Buildings, Works, Sites, etc. ..	*Cr.* 1,290	*Cr.* 45	*Cr.* 126	*Cr.* 2	*Cr.* 14	4,079,396
Subscription to Capital of Amalgamated Wireless Ltd.	..	..	..	..	..	300,000
Radio Stations and Equipment ..	..	..	..	..	..	104,538
Serum and Health Laboratories ..	..	..	..	..	..	80,140
Other Health Buildings and Services	..	..	..	..	..	21,864
Repatriation Buildings, etc. ..	..	..	..	..	..	47,026
War Service Homes (*a*)	..	..	..	..	..	7,329,523
Railways	*Cr.* 339	*Cr.* 9,698	*Cr.* 40,809	*Cr.* 7,251	*Cr.* 1,714	13,765,776
Territories (*b*)	*Cr.* 6,768	*Cr.* 6,262	*Cr.* 7,812	*Cr.* 8,364	*Cr.* 12,376	8,783,263
Immigration	..	..	..	..	..	1,680,834
Assistance to States—						
Unemployment Relief	*Cr.* 3,822	(*c*) 223,459	..	..	..	2,667,020
Mining	..	..	..	..	..	283,750
Forestry	..	..	..	..	..	322,000
Farmers' Debt Adjustment ..	2,000,000	..	..	..	..	7,967,000
Roads	..	..	..	..	..	249.686
Wire and Wire Netting	..	..	..	..	..	608,846
Drought Relief	..	..	..	..	..	1,844,205
Housing	..	..	..	6,795,000	11,015,000	17,810,000
Wheat Bounty	..	..	..	..	..	3,429,571
Other	..	..	..	..	..	1.381,094
Total Additions, New Works, Buildings, etc.	3,593,714	206,454	*Cr.* 49,952	6,779,383	11,000,896	128,323,279
GRAND TOTAL	3,593,714	377,363,389	265,990,533	159,727,026	48,894,893	2079,475,924

(*a*) In addition, £13,045,408 was expended from War Loan Fund prior to 1923–24. (*b*) Includes Administration and other Public Buildings, Australian Capital Territory. (*c*) Adjustment of credits in previous years.

4. **Properties Transferred from States.**—At the time of Federation, when the Commonwealth took over the control of several departments previously administered by the States, a large amount of property was handed over to the Commonwealth Government, which paid interest to the States at the rate of 3½ per cent. on the value of the properties so transferred. (Particulars of the valuation of the properties are given in Official Year Book No. 14, p. 694.) The temporary provisions of the Financial Agreement between the Commonwealth Government and the Governments of the several States provided, *inter alia*, that the Commonwealth Government would, for the period of two years from 1st July, 1927, pay to each State interest at the rate of 5 per cent. per annum on the agreed value of transferred properties as follows :—New South Wales, £4,788,005 ; Victoria, £2,302,862 ; Queensland, £1,560,639 ; South Australia, £1,035,631 ; Western Australia, £736,432 ; and Tasmania, £500,754 ; a total of £10,924,323.

From 1st July, 1929, the Commonwealth Government assumed all liability for so much of the public bebt of the States maturing in London bearing interest at the rate of 5 per cent. per annum as was equivalent to the agreed value of the transferred properties shown above. The Commonwealth Government received the freehold or equivalent title to the transferred properties consisting of land or interests in land, and all liability of the Commonwealth to the State in respect to transferred properties was extinguished from that date.

5. **1914–18 War Loan from the British Government.**—On the outbreak of the 1914–18 War, the Commonwealth Government obtained a loan from the British Government for the purpose of financing the prospective large military expenditure. At first, the arrangement was that the British Government should advance the sum of £18,000,000. Subsequently, further loans amounting to £31,500,000 were negotiated. In addition to this capital indebtedness of £49,500,000, a further sum of £42,696,500 was due to the British Government for the maintenance of Australian troops.

Early in 1921 an arrangement was concluded with the British Government, by which almost the entire debt (upwards of £92,000,000) was consolidated. The Commonwealth Government undertook to extinguish the debt in about 35 years by annual payments representing 6 per cent. on the original debt, providing for interest at approximately £4 18s. 4d. per cent., and a sinking fund contribution of approximately £1 1s. 8d. per cent. By a later arrangement with the British Government, however, principal and interest repayments for 1931–32 and subsequent years were suspended. The principal outstanding on 30th June, 1947, was £79,724,000. Debt outstanding and interest payable on account of this loan are excluded from tables of the public debt outstanding and interest payable in subsequent paragraphs of this section.

6. **Flotation of 1914–18 War Loans in Australia.**—In addition to the advances from the British Government, the Commonwealth Government raised large amounts of money in Australia. Full details of the seven War Loans are given in Official Year Book No. 14, pages 695 and 696.

7. **New Loans Raised 1939–40 to 1946–47.**—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this and the next two paragraphs relate, therefore, to all loans raised for the Commonwealth and the States. During the eight years 1939–40 to 1946–47 new public loans raised in Australia totalled £1,241,922,000. Of this, £1,115,596,000 was raised for Defence, War and Rehabilitation purposes, £17,810,000 for purposes of the Commonwealth–States Housing Agreement, £7,318,000 for public works and other purposes of the Commonwealth, £58,180,000 for public works and other purposes of the States, and £43,018,000 for funding short-term debt on account of States' revenue deficits Except for £12,000,000 borrowed from the United Kingdom Government in 1940–41 and redeemed in 1943–44, no new loans were raised in London or New York during this period

COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

Month of Raising.	Amount Invited.	Number of Subscribers.	Amount Subscribed.	Rate of Interest.	Year of Maturity.	Price of Issue.	Allocated to— Defence, War (1939–45) Services and Post-war Charges.	Allocated to— Other Purposes
	£'000.		£'000.	%		£	£'000.	£'000
1939–40—								
December	12,000	(b)	12,000	3¼	1942–44	100	2,000	10,000
March	18,000	14,339	8,958 9,207	3⅛ 3⅜	1945 1950–56	100	7,676	10,489
May	20,000	32,792	6,747 13,836	2¾ 3¼	1945 1950–56	100	20,583	.
1940–41—								
November	28,000	21,830	7,692 20,813	2¾ 3¼	1945 1950–56	100	20,505	8,000
April	35,000	57,217	13,642 22,230	2½ 3¼	1946 1950–56	100	27,872	8,000
1941–42—								
October	30,000	83,378	5,387 28,771	2¼ 3¼	1945–46 1950–57	100	34,158	
February (First Liberty Loan)	35,000	244,589	12,869 35,462	2¼ 3¼	1945–46 1950–58	100	48,331	
June (Second Liberty Loan)	35,000	196,510	7,032 30,341	2¼ 3¼	1946–47 1950–58	100	37,373	..
June	3,019	(b)	3,019	2¼	1946–47	100	..	3,019
1942–43—								
November (Austerity Loan)	77,300	454,838	22,090 60,577	2¼ 3¼	1946–47 1950–58	100	82,667	
March (Third Liberty Loan)	100,000	432,392	18,661 83,144	2¼ 3¼	1947–48 1950–59	100	101,805	..
June	235	(b)	235	2¼	1947–48	100	..	235
1943–44—								
October (Fourth Liberty Loan)	125,000	567,533	24,500 101,908	2¼ 3¼	1947–49 1950–58	100	126,408	
March (First Victory Loan)	150,000	452,700	25,710 124,839	2¼ 3¼	1948–49 1950–60	100	150,549	
1944–45—								
September (Second Victory Loan) ..	112,479	421,456	15,361 98,576	2¼ 3¼	1948–49 1950–60	100	113,937	.
December (c) .	43,018	(b)	43,018	1	1945–83	100	..	43,018
March (Third Victory Loan)	100,000	422,714	12,342 94,960	2¼ 3¼	1949–50 1950–61	100	107,302	
1945–46—								
July	330	(b)	330	2¼	1949–50	100	..	330
September (Fourth Victory Loan) .	85,000	260,271	24,102 63,120	2¼ 3¼	1949–50 1950–61	100	87,231	.
March (First Security Loan) ..	70,000	193,463	17,209 61,262	2 3¼	1949 1955–58	100	78,471	..
June	6,795	(b)	6,795	3	1956	100	..	6,795
1946–47—								
October (Second Security Loan) ..	64,020	195,005	4,824 64,948	2 3¼	1949 1955–58	100	61,272	8,500
December	5,575	(b)	5,575	3	1956	100	..	5,575
April (Third Security Loan) ..	25,000	72,011	1,458 28,363	2 3¼	1950 1956–59	100	7,456	22,365
Total 1939–40 to 1946–47 ..	1,081,771	..	1,241,922	..	..	..	1,115,596	126,326

(a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (*see* below). (b) Special issue (taken up by Commonwealth Bank of Australia). (c) Debentures issued for purpose of retiring Commonwealth Treasury Bills originally issued to meet revenue deficits of the States between 30th June, 1927, and 1st July, 1935.

In addition to the amounts included in the table above, at 30th June, 1947, £78,770,000 had been subscribed for War Savings and Savings Certificates (Five and Seven Years' Series), £1,792,000 for National Savings Bonds, £225,000 by War and National Savings Stamps and £10,769,000 for advance loan subscriptions.

After allowing for repurchases the net subscriptions to War Savings and Savings Certificates at 30th June, 1947, was £59,526,000.

"Over the Counter Sales," which are small amounts borrowed by the States by virtue of certain statutory rights, are also excluded from the above table. During the eight years these amounted to £16,437,000.

8. Conversion and Redemption Loans, 1939–40 to 1946–47.—(i) *Australia.* Particulars of conversion loans raised in Australia during the eight years 1939–40 to 1946–47 are given in the following table :—

COMMONWEALTH CONVERSION LOANS RAISED IN AUSTRALIA.

Month of Raising.	Old Loan. Amount.	Old Loan. Rate of Interest.	New Loan. Amount.	New Loan. Rate of Interest.	New Loan. Price of Issue.	New Loan. Year of Maturity.	Reduction in Annual Liability for Interest.
	£A'000.	%	£A'000.	%	£		£A'000.
1939–40	..	..	..	..	..	..	..
1940–41 ..	..	..	..	..	..	..	..
1941–42—							
October	65,985	4	5,343 60,642	2¼ 3¼	100 100	1945–46 1950–57	535
1942–43—							
November	21,783	3¾	650 21,133	2¼ 3¼	100 100	1946–47 1950–58	114
1943–44—							
August	12,252	3½	2,973 9,279	2¼ 3¼	100 100	1947–48 1950–59	54
1944–45—							
September ..	5,602 35,064	3 4	6,999 33,667	2¼ 3¼	100 100	1948–49 1950–60	301
1945–46—							
July	13,267 7,890	2½ 3⅜	13,503 7,654	2¼ 3¼	100 100	1949–50 1950–61	45
1946–47—							
August ..	13,548	2½	4,593 8,955	2 3¼	100 100	1949 1955–58	−44
October	17,677	2½	5,258 12,419	2 3⅛	100 100	1949 1955–58	−67
Total	193,068	..	193,068	..	..	..	938

(ii) *London.* Particulars of conversion loans raised in London prior to 1939–40 are shown on pages 820 and 821 of Official Year Book No. 34 and in previous issues. During the eight years 1939–40 to 1946–47 conversion loans raised in London amounted to £173,183,000. In addition, loans maturing in London amounting to £53,147,000 were repatriated to Australia. Details of these loans are shown in the following table :—

COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON.

Month of Raising.	Old Loan. Amount.	Old Loan. Rate of Interest.	New Loans. Amount raised in— London.	New Loans. Amount raised in— Australia.	New Loans. Rate of Interest.	New Loans. Price of Issue.	New Loans. Year of Maturity.	Reduction in Annual Liability for Interest and Exchange. (a)
	£stg. '000.	%	£stg. '000.	£A'000.	%	£		£A'000.
1939–40—								
December ..	448 4,157	3 3½	4,605	..	3½	99	1942–44	−3
1940–41—								
May	13,470	3	13,470	..	3	100	1943–44	..
1941–42—								
July	18,109 11,902	5 4½	30,011	..	3½	99	1961–66	527
1942–43—								
December ..	16,451	2¾	16,451	..	3	98	1944–46	−52
1943–44—								
January ..	4,491	3½	..	5,631	2½	100	1947–48	56
1944–45—								
September ..	6,131	3	..	7,687	2¼	100	1948–49	38
January ..	3,959	3½	..	4,963	3¼	100	1950–60	12
1945–46—								
July	94,312	5	60,000	43,017	3¼	100	*b*1965–69 *c*1950–61	2,069
December ..	14,055	5	14,055	..	3	98	1958–60	352
1946–47—								
July	16,075	3	16,075	..	2¾	100	1967–71	50
January ..	4,254	3	..	2,667 2,667	2 3⅛	100 100	1950 1956–59	23
January ..	17,098 1,418	4 3½	18,516	..	2¾	100	1970–75	539
Total ..	226,330	..	173,183	66,632	..	..	..	3,411

(*a*) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A.125.375 = £stg. 100. (*b*) Loan raised in London. (*c*) Loan raised in Australia

(iii) *New York.* During 1946–47 the Queensland 6 per cent. loan in New York became due for redemption and the option of redeeming other loans bearing interest at 5 per cent. and 4½ per cent. occurred. In order to take advantage of lower rates of interest, the Commonwealth gave notice that it intended to redeem the latter loans and three loans totalling $90,000,000 were raised to provide the money for redemption. Particulars of these loans are given in the following table. These operations are the first conversion operations undertaken in New York.

COMMONWEALTH LOANS RAISED IN NEW YORK FOR REDEMPTION OF EXISTING LOANS.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest.(a)	
	Amount.	Rate of Interest.	Amount.	Rate of Interest.	Price of Issue.	Year of Maturity.	United States of America Currency.	Australian Currency (b)
	$'000.	%	$'000.	%	£		$'000.	£A'000.
1946–47—								
August	18,329	5	20,000	3¼	100	1956	266	83
December ..	17,513 7,851	5 6	25,000	3½	98½	1966	472	147
February ..	44,626	4½	45,000	3⅜	99	1962	489	153
Total ..	88,319	..	90,000	..	..	..	1,227	383

(*a*) No account has been taken of the cost of issuing the new loans at a discount. (*b*) Converted at selling rate of exchange on 30th June, 1947—$3.2002 = £A1.

9. **Summary of Loan Transactions 1937–38 to 1946–47.**—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the last ten years.

COMMONWEALTH LOAN TRANSACTIONS: SUMMARY.

Year ended 30th June.	New Loans.				Net Increase in short Term Debt in—			Loans Raised for Conversion or Redemption of Existing Debt Maturing in—			
	Public Loans (a) Raised in—		Net increase of Miscellaneous Debt in— (b)		Australia.		London.	Australia.	London.		New York
									Raised in—		
	Australia.	London.	Australia.	London.	Public.	Internal.			Australia.	London.	
	£A'000.	£stg. '000.	£A'000.	£stg. '000.	£A'000.	£A'000.	£stg. '000.	£A. '000.	£A. '000.	£stg. '000.	$'000.
1938	18,613	7,000	1,212	..	190	− 277	− 4,225	2,186	..	11,410	
1939	20,457	6,000	1,667	..	3,630	..	− 1,275	64,847	..	2,518	
1940	50,748	..	11,028	..	− 4,765	..	− 250	..	..	4,605	
1941	64,377	..	14,197	12,100	1,710	..	− 250	..	..	13,470	
1942	122,881	..	14,478	..	78,391	2,296	1,474	65,985	..	30,011	
1943	184,707	..	31,304	254	172,886	8,500	− 1,399	21,783	..	16,451	
1944	276,957	..	− 6,952	− 12,007	77,905	42,718	− 1,112	12,252	5,631	..	
1945	264,257	..	14,218	..	− 32,745	32,104	− 250	40,666	12,650	..	
1946	172,827	..	2,390	− 347	− 330	..	− 250	21,157	43,017	74,055	..
1947	105,168	..	8,086	..	− 65,000	25,000	− 250	31,225	5,334	34,591	90,000

(*a*) Includes loans raised for redemption of Treasury Bills. (*b*) "Over the Counter Sales" and net increase in debt on account of Citizens' National Emergency Loans, War Savings and Savings Certificates and Stamps, National Savings Bonds and Stamps, and Advance Loan subscriptions. Debt in London includes Citizens' National Emergency Loans and debt to United Kingdom Government.

NOTE.—Minus sign (−) denotes decrease.

10. **Public Debt for Commonwealth Purposes.**—(i) *General.* In the Public Debt tables which follow, the units of currency are, for debt maturing and interest payable in Australia, £ Australian, in London £ sterling, in New York £ sterling. The New York debt is payable in dollars, but for the purposes of the tables dollars have been arbitrarily converted to £ sterling at the rate of 4.8665 dollars to £stg.1. Details of Commonwealth debt in Australian currency are given in section C, Commonwealth and State Finance, paragraph 3 of this Chapter (see page 682).

(ii) *Total Debt.* Reference has already been made to the development of the Commonwealth public debt and the following table shows the debt of the Commonwealth (excluding that of the States) at 30th June, 1947 :—

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE, 1947.

Particulars.	Maturing in—			Total.
	London. (a)	New York.	Australia.	
	£ Stg.	£ Stg.	£ Aust.	£
War (1914–18) Debt—				
Stock and Bonds	10,645,160	..	158,588,357	169,233,517
War and Peace Savings Certificates and Stamps, War Gratuity Bonds	..	..	153,414	153,414
Total	10,645,160	..	158,741,771	169,386,931
War (1939–45) Debt—				
Stock and Bonds	5,775,000	..	1,070,439,885	1,076,214,885
Advance Loan Subscriptions	..	..	10,768,800	10,768,800
National Savings Bonds..	..	..	1,792,050	1,792,050
War Savings and Savings Certificates ..	..	..	59,525,911	59,525,911
War Savings Stamps	..	..	189,357	189,357
National Savings Stamps	..	..	35,563	35,563
Treasury Bills, Internal	..	..	110,500,000	110,500,000
Treasury Bills, Public	..	..	278,280,000	278,280,000
Total	5,775,000	..	1,531,531,566	1,537,306,566
Works and other Purposes—				
Stock and Bonds	51,064,409	15,797,974	54,288,878	121,151,261
Treasury Bills and Debentures .. .	2,220,160	..	..	2,220,160
Treasury Bills, Internal	..	..	10,810,000	10,810,000
Total, Works and other Purposes	53,284,569	15,797,974	65,098,878	134,181,421
Total, Commonwealth Purposes ..	69,704,729	15,797,974	1,755,372,215	1,840,874,918

PER HEAD OF POPULATION.(b)

	(Stg.) £ s. d.	(Stg.) £ s. d.	(Aust.) £ s. d.	£ s. d.
War (1914–18) Debt	1 8 1	..	20 18 10	22 6 11
War (1939–45) Debt	0 15 3	..	202 0 6	202 15 9
Works and other Purposes	7 0 7	2 1 8	8 11 9	17 14 0
Total, Commonwealth Purposes ..	9 3 11	2 1 8	231 11 1	242 16 8

(a) Excludes War (1914–18) Debt due to United Kingdom Government, £79,724,220; *see* para. 5, page 641. (b) Based on population of Australia at 30th June, 1947.

(iii) *Place of Flotation.* Since 1931–32 few new loans have been raised overseas. The only loans raised in New York since 1927–28 have been those for the purpose of redeeming loans carrying a high rate of interest, on which an option of redemption occurred in 1946 and 1947. Loans raised in London have been almost exclusively conversion loans. Particulars of these loans are given on pages 643–4 of this issue and in previous issues.

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE: PLACE OF FLOTATION.

Place of Flotation, etc.		1939.	1944.	1945.	1946.	1947
War (1914–18) Debt—						
London (*a*) ..	£ Stg.	11,020,161	11,020,160	11,020,160	10,645,160	10,645,160
Total Overseas ..	£ Stg.	11,020,161	11,020,160	11,020,160	10,645,160	10,645,160
Australia	£ Aust.	175,193,890	164,628,150	159,317,670	159,397,702	158,741,771
Total War (1914–18) Debt	£	186,214,051	175,648,310	170,337,830	170,042,862	169,386,931
War (1939–45) Debt—						
London	£ Stg.	..	6,122,000	6,122,000	5,775,000	5,775,000
Total Overseas ..	£ Stg.	..	6,122,000	6,122,000	5,775,000	5,775,000
Australia	£ Aust.	..	1,098,260,599	1,357,272,038	1,510,023,564	1,531,531,566
Total War (1939–45) Debt	£	..	1,104,382,599	1,363,394,038	1,515,798,564	1,537,306,566
Works and other Purposes—						
London	£ Stg.	72,096,566	64,362,290	64,112,290	53,534,569	53,284,569
New York.. ..	£ Stg.	15,913,501	15,790,414	15,790,414	15,790,414	15,797,974
Total Overseas ..	£ Stg.	88,010,067	80,152,704	79,902,704	69,324,983	69,082,543
Australia	£ Aust.	43,302,593	36,190,330	35,606,514	54,165,698	65,098,878
Total Debt for Works, etc.	£	131,312,660	116,343,034	115,509,218	123,490,681	134,181,421
Total Debt—						
London (*a*) ..	£ Stg.	83,116,727	81,504,450	81,254,450	69,954,729	69,704,729
New York.. ..	£ Stg.	15,913,501	15,790,414	15,790,414	15,790,414	15,797,974
Total Overseas ..	£ Stg.	99,030,228	97,294,864	97,044,864	85,745,143	85,502,703
Australia	£ Aust.	218,496,483	1,299,079,079	1,552,196,222	1,723,586,964	1,755,372,215
Grand Total ..	£	317,526,711	1,396,373,943	1,649,241,086	1,809,332,107	1,840,874,918

(*a*) Excludes War (1914–18) Debt due to United Kingdom Government, £79,724,220.

(iv) *Amount of Debt at Various Rates of Interest.* The first debt taken over from South Australia consisted mainly of securities bearing interest varying from 3 per cent. to 4 per cent., the average rate of interest for the first year being £3 12s. 4d. per cent. For the first three years the increase in the debt was due almost entirely to the expansion of the 3½ per cent. stock of the Loan Fund, consequently the average rate of interest fell until on 30th June, 1914, it stood at £3 11s. 10d. per cent. With the loans raised for war and repatriation purposes interest rates rose until the National Debt Conversion Loan (July–August, 1931) reduced interest rates on internal loans by 22½ per cent. Conversion loans in London reduced the average rate of interest on debt maturing in London by more than £1 per cent. from £4 18s. 11d. per cent. in 1931 to £3 17s. 10d. per cent. in 1942. During the next three years the average rate rose to £4 0s. 10d. in 1945. Large conversion loans in July, 1945 were responsible for a further reduction in the average rate and at 30th June, 1947, it was £3 8s. 11d. per cent. The average rate of interest on internal loans at 30th June, 1947 was £2 14s. 0d. per cent. as compared with £5 9s. 10d. per cent. at 30th June, 1931. The average rate of interest payable on the total debt decreased from £5 4s. 11d. per cent. in 1931 to £2 14s. 10d. per cent. at 30th June, 1947.

The accompanying table gives particulars of the amounts of debt for Commonwealth purposes at 30th June, 1947, according to the various rates of interest :—

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE, 1947 : AMOUNTS AT EACH RATE OF INTEREST.

Rates of Interest.	Debt Maturing in—			
	London.(*a*)	New York.	Australia.	Total.
Per cent.	£ Stg.	£ Stg.	£ Aust.	£
5.0	..	12,242,236	..	12,242,236
4.0	5,775,000	..	86,981,369	92,756,369
3.875	..	..	45,992,275	45,992,275
3.75	20,730,800	..	6,552,140	27,282,940
3.675	..	..	66,510	66,510
3.625	..	..	4,274,740	4,274,740
3.5	5,989,400	..	..	5,989,400
3.375	..	3,555,738	180,892	3,736,630
3.25	34,989,369	..	919,643,170	954,632,539
3.2391	..	..	(*b*)56,516,564	56,516,564
3.125	..	..	(*c*)23,034,580	23,034,580
3.0	..	..	17,713,300	17,713,300
2.8347	..	..	(*d*)3,009,347	3,009,347
2.5	..	..	160,919,020	160,919,020
2.25	(*e*) 1,220,160	..	..	1,220,160
2.0	(*e*) 1,000,000	..	30,205,220	31,205,220
1.0	..	..	(*f*)399,590,000	399,590,000
Overdue	..	..	(*g*)454,039	454,039
War (1939–45) Savings Stamps	..	..	189,357	189,357
National Savings Stamps ..	..	..	35,563	35,563
War (1914–18) Savings Stamps	..	..	14,129	14,129
Total	69,704,729	15,797,974	1,755,372,215	1,840,874,918
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Average rate per cent.	3 8 11	4 12 8	2 14 0	2 14 10

(*a*) Excludes War (1914–18) Debt due to United Kingdom Government, £79,724,220 (rate of interest 4.91667 per cent.) *See* par. 5 page 641. (*b*) War Savings and Savings Certificates—7 years series. (*c*) Includes Advance Loan Subscriptions, £10,768,800. (*d*) Savings Certificates—5 years series. (*e*) Short term Treasury Bills and Debentures. (*f*) Includes Internal Treasury Bills, £121,310,000 and Public Treasury Bills, £278,280,000. (*g*) Includes War Gratuity Bonds, £11,892 and War (1914–18) Savings Certificates, £4,237.

(v) *Amount of Interest Payable.* The next table shows the annual interest payable in Australia and overseas on the Commonwealth Public Debt (excluding that of the States) at 30th June in the years 1939 and 1944 to 1947 :—

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE : INTEREST PAYABLE.

Interest on, and where payable.		1939.	1944.	1945.	1946.	1947.
War (1914–18) Debt—						
London	£ Stg. (*a*)	426,008	426,008	426,008	395,968	395,968
Australia	£ Aust.	6,949,706	6,331,464	5,981,923	5,990,250	5,977,934
Total War (1914–18) Debt..	£	7,375,714	6,757,472	6,407,931	6,386,218	6,373,902
Average Rate	%	£3 19s. 3d.	£3 16s. 11d.	£3 15s. 4d.	£3 15s. 2d.	£3 15s. 4d.
War (1939–45) Debt—						
London	£ Stg.	..	231,000	231,000	231,000	231,000
Australia	£ Aust.	..	26,583,590	33,092,708	37,848,633	39,474,549
Total War (1939–45) Debt..	£	..	26,814,590	33,323,708	38,079,633	39,705,549
Average Rate	%	..	£2 8s. 10d.	£2 9s. 1d.	£2 10s. 3d.	£2 11s. 8d
Works and other Purposes—						
London	£ Stg.	2,977,546	2,620,097	2,614,472	1,781,300	1,775,675
New York	£ Stg.	777,586	771,780	771,780	771,780	732,118
Total Overseas	£ Stg.	3,755,132	3,391,877	3,386,252	2,553,080	2,507,793
Australia	£ Aust.	1,394,921	1,029,891	972,024	1,556,859	1,892,818
Total Debt for Works, etc.	£	5,150,053	4,421,768	4,358,276	4,109,939	4,400,611
Average Rate	%	£3 18s. 5d.	£3 16s. 2d.	£3 15s. 6d.	£3 6s. 7d.	£3 5s. 7d.
Total Debt—						
London(*a*)	£ Stg.	3,403,554	3,277,105	3,271,480	2,408,268	2,402,643
New York	£ Stg.	777,586	771,780	771,780	771,780	732,118
Total Overseas	£ Stg.	4,181,140	4,048,885	4,043,260	3,180,048	3,134,761
Australia	£ Aust.	8,344,627	33,944,945	40,046,655	45,395,742	47,345,301
Grand Total	£	12,525,767	37,993,830	44,089,915	48,575,790	50,480,062
Average Rate	%	£3 18s. 11d.	£2 14s. 8d.	£2 13s. 8d.	£2 13s. 8d.	£2 14s. 10d

(*a*) Excludes suspended interest on War (1914–18) Debt due to United Kingdom Governmen £3,919,774 *See* par 5, page 641.

(vi) *Dates of Maturity.* In the following tables the Commonwealth Public Debt at 30th June, 1947, has been classified according to (*a*) the latest year of maturity and (*b*) the earliest year of maturity.

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE, 1947.(a)

Classified According to Latest Year of Maturity.

Year of Maturity (year ended 30th June).	Maturing in— London.	Maturing in— New York.	Maturing in— Australia.	Total
	£ Stg.	£ Stg.	£ Aust.	£
1948	2,220,160	..	448,475,017	450,695,177
1949	..	..	65,466,060	65,466,060
1950	..	..	56,418,290	56,418,290
1951	..	..	59,547,771	59,547,771
1952	..	..	1,647,540	1,647,540
1953	..	..	1,792,050	1,792,050
1954	13,780,100	..	12,655,830	26,435,930
1955	..	..	40,571,880	40,571,880
1956	..	9,945,978	20,961,248	30,907,226
1957	6,950,700	..	49,829,900	56,780,600
1958	..	2,296,258	58,574,426	60,870,684
1959	..	..	252,486,390	252,486,390
1960	..	..	200,092,242	200,092,242
1961	16,233,817	..	235,656,290	251,890,107
1962	..	3,555,738	179,905,435	183,461,173
1964	5,775,000	..	..	5,775,000
1967	5,989,400	..	..	5,989,400
1970	18,425,774	..		18,425,774
1975	329,778			329,778
War (1939–45) Savings and Savings Certificates—				
Seven years series	..	..	56,516,564	56,516,564
Five years series	..	..	3,009,347	3,009,347
War (1939–45) Savings Stamps	..	..	189,357	189,357
National Savings Stamps	..	..	35,563	35,563
Advance Loan Subscriptions	..	..	10,768,800	10,768,800
War (1914–18) Savings Certificates	..	..	4,237	4,237
Peace Savings Certificates	..	..	123,155	123,155
War (1914–18) Savings Stamps	..	..	14,129	14,129
Overdue	..	..	449,802	449,802
Half-yearly	..	..	180,892	180,892
Total	69,704,729	15,797,974	1,755,372,215	1,840,874,918

(a) *See* notes to table on page 647.

PUBLIC DEBT FOR COMMONWEALTH PURPOSES AT 30th JUNE, 1947.(a)

CLASSIFIED ACCORDING TO EARLIEST YEAR OF MATURITY.

Year of Maturity (year ended 30th June).	Maturing in— London.	New York.	Australia.	Total
	£ Stg.	£ Stg.	£ Aust.	£
1948	2,220,160	2,296,258	492,368,437	496,884,855
1949	13,780,100	..	64,992,100	78,772,200
1950	..	..	59,200,460	59,200,460
1951	..	..	865,795.192	865,795,192
1952	..	..	1,647,540	1,647,540
1953	6,950,700	9,945,978	42,363,930	59,260,608
1954	..	..	1,717,780	1,717,780
1956	16,233,817	..	138,154,150	154,387,967
1957	..		17,840,780	17,840,780
1961	5,775,000	..	..	5,775,000
1962	5,989,400	3,555,738	..	9,545,138
1965	329,778	..	..	329,778
1966	18,425,774	..	..	18,425,774
War (1939–45) Savings and Savings Certificates—				
Seven years series		..	56,516,564	56,516,564
Five years series	..	..	3,009,347	3,009,347
War (1939–45) Savings Stamps	..	..	189,357	189,357
National Savings Stamps	..	..	35,563	35,563
Advance Loan Subscriptions	..	..	10,768,800	10,768,800
War (1914–18) Savings Certificates	..	..	4,237	4,237
Peace Savings Certificates	..	..	123,155	123,155
War (1914–18) Savings Stamps	..	..	14,129	14,129
Overdue	..	..	449,802	449,802
Half-yearly	..	..	180,892	180,892
Total	69,704,729	15,797,974	1,755,372,215	1,840,874,918

(a) See notes to table on page 647.

11. **Sinking Funds.**—Particulars relating to the creation of sinking funds are included in issues of the Official Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1938–39 and 1943–44 to 1946–47 are as follows :—

PUBLIC DEBT FOR COMMONWEALTH PURPOSES : SINKING FUND.

	Items.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.	Total 1923–24 to 1946–47.
		£	£	£	£	£	£
Cr.	Brought forward ..	1,252,784	1,056,040	1,074,316	3,962,583	5,908,167	..
	Balance transferred to Fund on 11th August, 1923 ..	..	..	..	..	..	2,262,983
	From Consolidated Revenue	3,917,825	10,839,972	12,597,457	13,907,377	14,442,955	119,321,273
	Repayments of Sundry Loans	16,510	796,825	219,748	491,933	360,502	3,200,720
	Purchase-money and Repayments under War Service Homes Act ..	628,950	812,367	851,813	941,978	1,043,185	16,272,171
	Half Net Profit Commonwealth Bank	321,448	632,867	741,943	879,385	937,683	9,513,105
	Reparation Moneys ..	148	..	..	..	..	5,574,245
	Interest on Investments ..	32,381	42,380	20,334	36,387	55,822	1,108,838
	Other Contributions ..	13,453	12,177	12,177	12,177	12,177	267,953
	Total	6,183,499	14,192,628	15,517,788	20,231,820	22,760,491	157,521,288
Dr.	Redemptions	5,052,336	13,118,312	11,555,205	14,323,653	14,177,494	148,938,291
	Carried forward	1,131,163	1,074,316	3,962,583	5,908,167	8,582,997	8,582,997

Information regarding the transactions of the States' Account of the National Debt Sinking Fund is published in the State Finance section of this issue, and, in greater detail, in the *Finance Bulletin* issued by this Bureau.

§ 5. Cost of 1914-18 War and Repatriation.

In view of the importance of the subject, a further reference is here made to the cost of the 1914–18 War. The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all charges for interest, sinking fund, pensions and other recurring charges consequent upon the War, and part of the expense of repatriation. On the other hand, the whole direct cost of the War and the larger proportion of the cost of repatriation were paid from loans. Detailed particulars relating to Repatriation, War and Service Pensions appear in Chapter XXVII.—"Repatriation" of this issue. The total cost from both sources to 30th June, 1947, is set out in the following table :—

COMMONWEALTH 1914–18 WAR EXPENDITURE.

Period.	From Consolidated Revenue Fund.			War Loan Expenditure. (b)
	War and Repatriation Services, including War Pensions.	Interest and Sinking Fund. (a)	Total.	
	£'000.	£'000.	£'000.	£'000.
1914–15 to 1918–19 ..	15,541	30,694	46,235	219,213
1919–20 to 1923–24 ..	50,370	94,507	144,877	77,374
1924–25 to 1928–29 ..	43,334	93,147	136,481	*Cr.* 52
1929–30 to 1933–34 ..	44,871	66,832	111,703	*Cr.* 5
1934–35 to 1938–39 ..	45,238	47,834	93,072	
1939–40 to 1943–44 ..	47,375	47,007	94,382	
1944–45	10,276	9,013	19,289	..
1945–46	10,038	8,854	18,892	..
1946–47	10,320	8,939	19,259	..
Discounts and Flotation Expenses on Loans, including Redemption and Conversion Loans	(c)	..	..	5,999
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the War	..	..	..	(d) 43,398
War Gratuities paid in cash ..	452	..	452	27,063
Total to 30th June, 1947	277,815	(e) 406,827	684,642	372,990

NOTE.—For particulars of expenditure relating to the 1939–45 War, *see* § 6, pages 653–5.

(a) Excludes interest on amounts raised for the States for Soldier Land Settlement. (b) Excludes expenditure on War Service Homes from 1923–24. (*See* page 640.) (c) Included above. (d) The total indebtedness to the Government of the United Kingdom involved in the Funding Arrangements Act 1921 was £92,480,000, the balance, £49,082,000, for cash supplied, being included above. At 30th June, 1947, the amount outstanding had been reduced to £79,724,000. Repayment of this debt and payment of interest were suspended in 1931, by arrangement with the United Kingdom Government. (e) Interest, £340,325,000; Sinking Fund, £66,502,000.

§ 6. Cost of Defence, War (1939-45) Services and Post-war Charges.

Details of the expenditure on Defence and War Services by the Departments of Defence, Navy, Army, Air, Munitions, Aircraft Production, Supply and Shipping, and Home Security are shown in the following table. Expenditure on defence and war services by other departments, including Labour and National Service, Information, Post-war Reconstruction, etc., is included under the heading of Other War Services.

The table hereunder shows, for the last eight years, particulars of the combined expenditures from revenue, trust and loan funds on Defence, War Services and Post-war Charges including works. Details of expenditure for the years 1940–41 to 1946–47 were not allotted to the various funds, and the total expenditure only was apportioned.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS : DEFENCE, WAR (1939–45) SERVICES AND POST-WAR CHARGES.

Details.	1939–40 to 1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.
Defence—					
Administrative	498	110	107	95	93
Publicity Censorship	52	45	(a)	(a)	(a)
National Register	61	(b)	(b)	(b)	(b)
Manpower Committee	101	(c)	(c)	(c)	(c)
Home Security	6	(d)	(d)	(d)	(d)
Treasury—-Defence Division (e) ..	42	54	59	53	37
Central Medical Co-ordination Committee	128	9	(f)	(f)	(f)
Joint Intelligence Organization ..	..	..	..	..	2
Buildings, works, etc.	280	10	9	7	8
Audit, Pensions, Interest, Sinking Fund, etc.	17	4	4	4	5
Total	1,185	232	179	159	145
Navy—					
Permanent Naval Forces—salaries and general expenses	23,201	12,500	12,666	13,231	6,504
General Services and Expenses—H.M.A. Ships and Depots	18,513	8,846	9,698	10,250	4,095
Civilian Services, Naval Establishments, etc.—Salaries and general expenses ..	6,548	3,404	3,585	3,062	2,919
Auxiliary vessels for naval defence purposes	3,384	767	334	679	1,906
Transport services	18,496	3,786	5,488	4,880	2,141
Merchant ships' equipment	737	253	86	29	85
Naval construction and additions to the fleet	14,920	3,609	2,226	1,423	1,020
Graving Dock—towards cost of construction	3,761	3,275	1,849	742	350
Miscellaneous war expenditure ..	531	143	178	143	245
Buildings, works, etc.	4,732	1,826	1,943	789	2,760
Maintenance and rent	159	62	121	124	124
Audit, Pensions, Interest, Sinking Fund, etc.	574	136	140	150	142
Total	95,556	38,607	38,314	35,502	22,291
Army—					
Australian Military Forces—pay and allowances	211,542	110,973	104,928	138,403	28,583
Camp Expenses—training and maintenance	72,373	32,774	25,627	16,647	2,500
General services	19,879	7,555	7,862	5,073	2,295
Civilian Services, Inspection Branch, etc.—Salaries and general expenses ..	8,794	3,373	2,830	1,602	1,401
Internees and Prisoners of War—maintenance	953	123	222	87	257
Australian Imperial Forces—maintenance overseas	14,747	..	..	..	..
Arms, armament, ammunition, etc. ..	234,301	49,471	27,813	13,172	24,421
Special Units Serving Abroad—maintenance	..	..	..	4	5,345
Buildings, works, etc.	34,950	11,085	4,330	2,350	647
Audit, Pensions, Interest, Sinking Fund, etc.	1,497	279	291	318	328
National Defence Contributions (Trust Account)	930	133	76	36	7
Total	599,966	215,766	173,979	177,692	65,784

(a) Transferred to Department of Information. (b) Provided under Department of Labour and National Service from 1940–41. (c) Transferred to Manpower Directorate from 1942–43. (d) Reconstituted as a separate Department from 1941–42. (e) Included under Administrative 1939–40 to 1941–42. (f) Transferred to Department of Health.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS: DEFENCE, WAR (1939-45) SERVICES AND POST-WAR CHARGES—*continued.*

Details.	1939-40 to 1942-43.	1943-44.	1944-45.	1945-46.	1946-47
	£'000.	£'000.	£'000.	£'000.	£'000.
Air—					
Royal Australian Air Force—pay and allowances	53,616	37,248	45,231	52,305	7,414
Civilian, Meteorological and general services	20,614	17,516	19,749	15,749	(a) 4,799
R.A.A.F. Squadrons—maintenance overseas	3,823	1,285	1,121	401	
Training of R.A.A.F. personnel in Canada	14,640	3,320	237	10	..
Aircraft, equipment and stores	89,856	59,831	46,214	24,488	10,406
Buildings, works, etc.	25,728	8,900	7,377	1,011	188
Audit, Pensions, Interest, Sinking Fund, etc.	345	89	97	104	133
Total	208,622	128,189	120,026	94,068	22,940
Munitions—					
Administrative—salaries and general exp.	4,358	2,911	2,269	1,729	1,056
Munitions Factories—salaries and general expenses (b)	363	80	173	606	1,787
Munitions Factories—working capital	3,010	..	..	..	(c) 92
Munitions Laboratories—salaries and general expenses	414	344	334	308	283
Machinery, plant, etc., for manufacture of munitions	22,890	4,883	699	..	..
Armament Annexes—plant, material, etc.	8,665	2,046	1,260	95	..
Reserves of raw materials	4,127	(d)	(d)	(d)	(d)
Technical Training	2,081	104	114	7	..
Electric supply in Australia—development	..	141	78	102	3
Shipbuilding—plant, etc.	970	464	4	10	15
Standard Ships—construction	2,684	2,062	2,690	2,839	(c) 1,904
Locomotives and Rolling Stock—Construction	264	932	984	153	1
Aircraft Production Section—					
Salaries and general expenses	(e)	(e)	(e)	562	402
Engine Factory	(e)	(e)	(e)	338	883
Plant equipment and machinery	(e)	(e)	(e)	844	
Annexes and buildings	(e)	(e)	(e)	27	
Buildings, works, etc.	24,263	4,881	965	93	350
Miscellaneous expenditure	974	329	396	475	372
Audit, Pensions, Interest, Sinking Fund, etc.	341	82	85	93	110
Total	75,404	19,259	10,051	8,281	7,258
Aircraft Production—					
Administrative—salaries and general expenses	651	597	902	(f)	(f)
Engine Factory—construction, equipment, etc.	2,061	93	81	(f)	(f)
Buildings, works, etc.	1,352	408	437	(f)	(f)
Miscellaneous expenditure	2,120	952	435	(f)	(f)
Audit, Pensions, Interest, Sinking Fund, etc.	1	1	1	(f)	(f)
Total	6,185	2,051	1,856	(f)	(f)
Supply and Shipping—					
Administrative—salaries and general expenses	2,784	1,120	1,229	1,264	1,172
Flax Production—Mills, general expenses, etc.	1,362	289	185	44	6
Reserves of stores, materials, etc.	3,981	1,295	1,943	1,137	
Oil Storage—Construction	1,263	..	363	37	21
Power Alcohol Distilleries—Construction and production	665	732	471	63	
Shipping Branch	1,605	1,825	2,261	3,739	3,774
Buildings, works, etc.	50	182	76	74	27
Miscellaneous expenditure	1,779	1,993	2,042	746	928
Audit, Pensions, Interest, and Sinking Fund, etc.	7	2	5	8	16
Total	13,496	7,438	8,575	7,112	5,944

(a) Excludes Meteorological Services, now provided under Department of the Interior. (b) Part only—balance provided from Trust Fund (Working Capital). (c) Provided under New Works. (d) Included under Department of the Army from 1942-43. (e) *See* Aircraft Production. (f) Transferred to Department of Munitions.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS: DEFENCE, WAR (1939–45) SERVICES AND POST-WAR CHARGES—*continued*.

Details.	1939–40 to 1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.
Home Security—					
Administrative—salaries and general expenses	168	83	32	23	(*a*)
Air Raid Precautions—					
Payments to the States	1,003	82	23	15	(*a*)
Purchase of equipment	1,086	53	..	..	(*a*)
Commonwealth Establishments	240	2	6	1	(*a*)
Bulk oil installations, protective measures	229	..	..	..	(*a*)
Miscellaneous expenditure	8	34	9	8	(*a*)
Total	2,734	254	70	47	(*a*)
Other War Services—					
Interest on Loans for War purposes	18,670	18,722	26,586	32,830	36,760
Exchange on interest remittances to London	341	59	59	59	59
Sinking Fund on Loans for War purposes	6,434	5,982	7,554	8,649	9,251
Loan Redemption and Conversion expenses	..	..	..	6	3
War Pensions	869	1,737	2,771	4,915	6,762
Peace Officers	1,280	725	629	342	174
U.N.R.R.A. and International Post-war Relief and Rehabilitation	..	..	47	5,811	18,117
Price Stabilization Subsidies	6	7,006	10,809	12,984	22,641
Division of Import Procurement	1,645	(*b*) 4,579	410	272	(*c*)
Rationing Commission—salaries and general expenses	435	448	510	351	491
Prices Commission—salaries and general expenses	330	335	491	560	762
Assistance to primary production	3,118	12,322	14,280	19,755	7,719
Department of Labour and National Service—					
Administrative—salaries and general expenses	365	385	419	328	(*c*)
Manpower Directorate	926	1,098	1,039	972	
Miscellaneous	165	108	69	19	
Department of Post-war Reconstruction—					
Administrative—salaries and general expenses	15	299	418	524	336
Financial assistance University Students	..	172	207	184	(*c*)
Commonwealth Reconstruction Training Scheme	..	42	510	3,146	9,674
War Service Land Settlement	..	..	..	1,495	2,001
Re-establishment Loans for Agricultural purposes	..	..	..	..	2,610
Miscellaneous	..	28	21	111	66
Department of Repatriation	240	403	1,101	3,651	7,915
Department of Information	588	199	(*d*) 298	(*d*) 287	(*c*)
Other Departments	8,884	7,476	6,839	6,517	2,379
Other Administrations (Recoverable Expenditure) (*e*)	15,281	4,361	2,897	3,664	5,496
United Kingdom Grant	..	..	..	..	25,000
Total	59,592	66,486	77,964	107,432	158,216
War Gratuity	..	..	..	143	2,882
Reciprocal Lend-Lease to the United States Forces	58,957	110,426	89,133	26,010	5,006
Lend-Lease Settlement	..	..	..	..	8,398
Miscellaneous Credits	*Cr.* 11,783	*Cr.* 43,575	*Cr.* 56,855	*Cr.* 62,176	*Cr.* 25,520
Credits from the Disposals Commission	..	..	*Cr.* 2,602	*Cr.* 15,635	*Cr.* 37,986
Total, Defence, War (1939–45) Services and Post-war Charges—					
Consolidated Revenue Fund	359,277	167,843	194,574	225,651	197,456
Trust Fund (*f*)	6,514	133	76	36	8
Loan Fund	744,123	377,157	266,040	152,948	37,894
GRAND TOTAL	1,109,914	545,133	460,690	378,635	235,358

(*a*) Provided under Department of the Interior. (*b*) Includes £4,001,000 Working Capital for payment to credit of Import Procurement Suspense Trust Account. (*c*) Provided under Ordinary Services. (*d*) Includes Publicity Censorship previously included with Department of Defence. (*e*) Munitions, Stores, etc. supplied to Governments of the United Kingdom and other Administrations. (*f*) Includes expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account and from National Defence Contributions Trust Account from 1941–42.

§ 7. Commonwealth Public Service Superannuation Fund.

This Fund, which was inaugurated on 20th November, 1922, is maintained by contributions of officers of Parliament, of employees of the Commonwealth Public Service, the Defence Departments, and other Commonwealth authorities, and by payments from Consolidated Revenue, the latter being made when the officers retire on pension. Full particulars as to the benefits, etc., will be found in Official Year Book, No. 18, p. 383. In September, 1937, legislation was passed extending superannuation rights to approximately 1,600 employees of the Repatriation Commission, the War Services Homes Commission, the High Commissioner's Office, London, and the Council for Scientific and Industrial Research. By the same legislation a Provident Account, forming part of the Superannuation Fund, was established, providing for compulsory contributions in respect of those employees who, through physical disabilities or failure to pass the required medical examination, are ineligible to contribute to the Superannuation Fund. Any other employee, whose contribution to the Superannuation Fund for the first two units of pension is in excess of the rate for age 45 years and above 5 per cent. of his salary, may elect to transfer to the Provident Account.

An amendment to the Act in 1942 extended superannuation rights to certain temporary employees and to the employees of semi-governmental authorities set up by the Commonwealth. This amending Act also increased the rates of contribution for new contracts in accordance with the recommendation of the actuaries in their report on the Third Quinquennial Investigation of the Fund. In 1945 an amending Act made special provisions in relation to certain former State employees, extending to them benefits equivalent to those to which they would have been entitled if they had continued to contribute to the State fund.

As a result of a further amending Act in 1947, the rate of existing pensions was increased by one quarter, and the maximum number of units for which an employee may contribute was increased from 16 units at a salary exceeding £832, to 26 units at a salary exceeding £1,664. By the same Act, a contributor may elect to contribute for reserve units up to a maximum of four units above the amount prescribed for his salary scale. These reserve units may be transferred to the Superannuation Fund when the contributor becomes eligible to contribute for additional units.

The number of contributors to the fund at 30th June, 1946, was 46,213 (39,928 males and 6,285 females) and the average pension for which contributions were being made was 6.008 units or £156 4s. 2d. per annum.

The income for the year 1945–46 was £1,433,740, of which officers' contributions represented £915,891 and interest on investments, etc. (including accrued interest). £509,376. The expenditure for the year was £536,932, of which £267,796 represented pension payments. At 30th June, 1946, the total funds invested amounted to £14,318,913 (at cost). The average rate of interest on investments at 30th June, 1946 was £3 15s. 9d. per cent.

Pensions in force on 30th June, 1946, including contributory and non-contributory but excluding commuted pensions, numbered 9,554, with a net annual liability of £901,248, of which £630,197 represented the share payable from the Consolidated Revenue Fund.

B. STATE FINANCE.

§ 1. General.

1. **Functions of State Governments.**—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to municipal or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the Central Government. Care, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XIII.,

"Local Government". In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds—the "Consolidated Revenue Fund", the "Trust Fund", and the "Loan Fund". All revenue (except certain items paid into special funds) collected by the State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a Special Act.

Figures relating to New South Wales represent the transactions of the *Consolidated Revenue Fund* and the Business Undertakings included in the Annual Budget Papers. These latter are as follows:—Railways, Tramways, and Omnibuses, Sydney Harbour Trust Section of the Maritime Services Board, and Road Transport and Traffic Fund. Deductions have been made from the Budget figures, however, in order to obviate duplications caused by inter-fund payments and to maintain uniformity from year to year in the presentation of statistics. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

In Tasmania the separation of the Transport Commission's financial transactions from the Consolidated Revenue Fund from 1st July, 1939, has occasioned considerable decreases in the figures since 1939-40 as compared with those for the previous years.

The *Trust Fund* comprises all moneys held in trust by the Government, and includes such items as sinking funds, insurance companies' deposits, etc.

The *Loan Fund* is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. **Inter-relation of Commonwealth and State Finances.**—A statement in some detail, covering the inter-relation of Commonwealth and State Finances during the period from the inception of Federation to the passing of the Financial Agreement Act 1928, was published in Official Year Book, No. 22, pages 379–80. On pages 633–9 of this issue details of the constitutional and other requirements for the distribution of Commonwealth revenues are given, and in section C.—Commonwealth and State Finance, par. 4, will be found a summary of the original Financial Agreement and subsequent agreements affecting it.

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. **General.**—The principal sources of State revenue are:—

(*a*) Taxation; (*b*) the Business Undertakings controlled by the State Governments; (*c*) Sale of and Rental from Crown lands; (*d*) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts; (*e*) Interest on advances; and (*f*) Miscellaneous sources, comprising Fines, Fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of Business Undertakings, the principal contributors being the Government Railways and Tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by Taxation, the Commonwealth Payments under the Financial Agreement and Special Grants, and Interest Receipts. Since the introduction in 1942–43 of the Uniform Tax Scheme, Commonwealth payments under the Income and Entertainments Tax Reimbursement Acts and, from 1946–47, under the Tax Reimbursement Act, have replaced revenue previously received from Income and Entertainments taxes.

2. **Revenue Received.**—The following table shows particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the years 1938–39 and 1943–44 to 1946–47.

STATE CONSOLIDATED REVENUE.

Year.	N.S.W.(*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(*a*)	Total.
TOTAL COLLECTIONS.							
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	51,710	26,985	19,330	12,304	10,950	3,615	124,894
1943–44 ..	72,471	35,544	28,968	15,545	13,589	3,499	169,616
1944–45 ..	74,213	35,273	26,447	16,113	13,954	3,657	169,657
1945–46 ..	71,859	35,191	24,774	16,343	14,408	3,933	166,508
1946–47 ..	73,500	37,359	25,033	17,193	14,981	4,507	172,573
PER HEAD OF POPULATION.(*b*)							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1938–39 ..	18 18 0	14 8 3	19 3 6	20 13 6	23 9 0	15 4 2	18 1 2
1943–44 ..	25 4 8	17 18 7	27 9 4	25 4 6	28 8 1	14 6 7	23 8 1
1944–45 ..	25 11 6	17 13 0	24 15 0	25 17 1	28 15 7	14 16 2	23 3 4
1945–46 ..	24 10 0	17 9 2	22 17 1	25 18 0	29 7 11	15 14 3	22 9 9
1946–47 ..	24 16 0	18 6 3	22 16 4	26 16 10	30 2 7	17 14 1	23 0 8

(*a*) *See* § 1 par. 2, page 657. (*b*) Based on mean population of each financial year

3. **Sources of Revenue.**—(i) *General.* Classifying the revenue of the several States in the manner indicated in par. 1 above, particulars for the year 1946–47 are as follows :—

STATE CONSOLIDATED REVENUE : SOURCES, 1946–47.

Source of Revenue.	N.S.W.(*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(*a*)	Total
TOTAL REVENUE.							
	£	£	£	£	£	£	£
Taxation (*b*) ..	8,041;139	5,846,799	3,010,118	2,165,517	1,137,557	1,280,885	21,482,015
Business Undertakings ..	38,554,137	16,473,217	10,549,914	6,900,599	5,952,910	3,000	78,433,777
Lands	1,862,400	824,750	1,607,214	258,009	526,373	111,629	5,190,375
Interest (n.e.i.) ..	411,800	1,580,207	774,567	805,547	473,094	480,097	4,525,312
Commonwealth Payments—							
Under Financial Agreement and Special Grants	2,917,411	2,127,159	1,096,235	2,703,816	2,346,432	1,141,859	12,332,912
Commonwealth Tax Reimbursements ..	16,127,942	8,770,774	6,564,625	3,435,254	3,350,555	1,214,698	39,463,848
Miscellaneous .	5,585,443	1,730,028	1,430,458	923,838	1,193,954	274,958	11,144,679
Total ..	73,500,272	37,358,934	25,033,131	17,192,580	14,980,875	4,507,126	172,572,918
PER HEAD OF POPULATION.(*c*)							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Taxation (*b*) ..	2 14 3	2 17 4	2 14 10	3 7 7	2 5 9	5 0 8	2 17 4
Business Undertakings ..	13 0 3	8 1 6	9 12 4	10 15 6	11 19 6	0 0 3	10 9 4
Lands .. .	0 12 7	0 8 1	1 9 4	0 8 1	1 1 2	0 8 9	0 13 11
Interest (n.e.i.) ..	0 2 9	0 15 6	0 14 1	1 5 2	0 19 0	1 17 9	0 12 1
Commonwealth Payments—							
Under Financial Agreement and Special grants	0 19 8	1 0 10	1 0 0	4 4 5	4 14 5	4 9 8	1 12 11
Commonwealth Tax Reimbursements ..	5 8 10	4 6 0	5 19 8	5 7 3	6 14 9	4 15 5	5 5 4
Miscellaneous ..	1 17 8	0 17 0	1 6 1	1 8 10	2 8 0	1 1 7	1 9 9
Total ..	24 16 0	18 6 3	22 16 4	26 16 10	30 2 7	17 14 1	23 0 8

(*a*) *See* § 1 par. 2. page 657. (*b*) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (*c*) Based on mean population of the financial year.

In comparing the revenue of the States, it should be borne in mind that business undertakings which in one State may be controlled by the Government are, in another State, controlled by a board or trust. For example, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in trusts. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by trusts. All the Tasmanian transport facilities are controlled by a commission.

(ii) *Revenue from Taxation.* (*a*) *General.* The following table shows, for the year 1946–47, particulars of all State taxation collections irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those given in the tables relating to the Consolidated Revenue Funds and represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under "Entertainments Tax" instead of under "Stamp Duties" and "Licences" respectively. Commonwealth payments under the State Grants (Tax Reimbursement) Act are included because these grants have replaced revenue received by the States from Income and Entertainments taxes prior to the introduction of the Uniform Tax Scheme in 1942–43 :—

STATE REVENUE FROM TAXATION(*a*) : TOTAL COLLECTIONS, 1946–47.

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Probate and Succession Duties	3,689,983	2,460,655	943,332	553,420	261,339	158,891	8,067,620
Other Stamp Duties ..	2,135,637	1,335,406	948,271	350,234	387,998	121,002	5,278,548
Land	2,180	382,599	375,303	286,481	111,920	91,759	1,250,242
Income (Arrears)	344,749	89,226	36,375	22,746	33,445	4,080	530,621
Liquor	884,288	483,968	165,178	35,998	117,412	61,706	1,748,550
Lotteries	..	..	154,500	..	..	*b*746,776	901,276
Entertainments (*c*) ..	906,466	969,401	147,752	267,032	184,082	91,355	2,566,088
Motor	2,937,588	2,093,747	1,068,979	737,371	429,009	280,690	7,547,384
Licences (n.e.i.)	77,791	104,565	235,733	33,546	14,986	5,316	536,267
Other .	15	22,796		7,113	34,376	..	
Total	10,978,727	7,942,363	4,075,423	2,293,941	1,574,567	1,561,575	28,426,596
Commonwealth Tax Reimbursements	16,127,942	8,770,774	6,564,625	3,435,254	3,350,555	1,214,698	39,463,848
GRAND TOTAL ..	27,106,669	16,713,137	10,640,048	5,729,195	4,925,122	2,776,273	67,890,444

(*a*) In this table the particulars represent the total net collections from all sources of taxation irrespective of whether such moneys are paid to Consolidated Revenue Funds. (*b*) Includes Income Tax on Lottery Prizes, £485,813. (*c*) Mainly Racing.

The table hereunder shows the percentage on the total taxation revenue of collections under individual taxes for the year 1946–47 :—

STATE REVENUE FROM TAXATION : PERCENTAGES OF TOTAL, 1946–47.

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	%	%	%	%	%	%	%
Probate and Succession Duties	13.61	14.72	8.86	9.66	5.31	5.72	11.88
Other Stamp Duties ..	7.88	7.99	8.91	6.11	7.88	4.36	7.77
Land	..	2.29	3.53	5.00	2.27	3.31	1.84
Income (Arrears)	1.27	0.53	0.34	0.40	0.68	0.15	0.78
Liquor	3.26	2.89	1.55	0.63	2.38	2.22	2.58
Lotteries	..	..	1.45	..	..	26.90	1.33
Entertainments	3.35	5.80	1.39	4.66	3.74	3.29	3.78
Motor	10.84	12.53	10.05	12.87	8.71	10.11	11.12
Licences (n.e.i)	0.29	0.63	2.22	0.59	0.30	0.19	0.79
Other	..	0.14		0.12	0.70	..	
Total	40.50	47.52	38.30	40.04	31.97	56.25	41.87
Commonwealth Tax Reimbursements	59.50	52.48	61.70	59.96	68.03	43.75	58.13
GRAND TOTAL ..	100.00	100.00	100.00	100.00	100.00	100 00	100.00

Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. Thereafter, until the introduction of the Uniform Income Tax Scheme the most productive State taxes were the various Income Taxes, which, in 1941–42, included Unemployment Relief, State Development and Hospital Taxes.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund and tax reimbursements received from the Commonwealth, during the five years 1938–39 and 1943–44 to 1946–47, are shown in the following table :—

STATE REVENUE FROM TAXATION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			TOTAL COLLECTIONS.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	20,263	12,023	8,646	4,199	3,597	1,779	50,507
1943–44(a)	23,012	12,406	8,783	4,146	3,832	1,948	54,127
1944–45(a)	23,444	12,779	8,928	4,430	3,899	2,063	55,543
1945–46(a)	24,809	13,331	9,484	4,613	4,046	2,298	58,581
1946–47(a)	27,107	16,713	10,640	5,729	4,925	2,776	67,890
			PER HEAD OF POPULATION.(b)				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1938–39 ..	7 8 2	6 8 5	8 11 6	7 1 1	7 14 1	7 9 8	7 6 1
1943–44(a)	8 0 3	6 5 2	8 6 7	6 14 7	8 0 2	7 19 7	7 9 4
1944–45(a)	8 1 7	6 7 11	8 7 1	7 2 2	8 0 10	8 7 1	7 11 8
1945–46(a)	8 9 2	6 12 3	8 15 0	7 6 2	8 5 1	9 3 7	7 18 3
1946–47(a)	9 2 11	8 3 10	9 13 11	8 18 11	9 18 1	10 18 1	9 1 3

(a) Includes Commonwealth Tax Reimbursements. (b) Based on mean population of each financial year.

(*b*) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given in Chapter XIV. " Private Finance ".

The duties collected for the five years 1938–39 and 1943–44 to 1946–47 are as follows :—

STATE PROBATE AND SUCCESSION DUTIES : NET COLLECTIONS.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	2,364,124	2,710,824	2,779,573	3,317,401	3,689,983
Victoria..	1,374,355	1,778,266	1,853,991	1,825,180	2,460,655
Queensland	677,037	746,629	701,235	890,782	943,332
South Australia	366,526	399,796	521,179	557,290	553,420
Western Australia ..	123,798	232,762	275,477	262,280	261,339
Tasmania	94,669	144,705	136,308	212,125	158,891
Total	5,000,509	6,012,982	6,267,763	7,065,058	8,067,620

(*c*) *Other Stamp Duties.* The revenue derived from stamp duties (excluding probate and succession duties and stamp duties on betting tickets) for the five years 1938–39 and 1943–44 to 1946–47 is shown in the accompanying table :—

OTHER STATE STAMP DUTIES : NET COLLECTIONS.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	1,286,124	1,214,661	1,337,285	1,653,851	2,135,637
Victoria..	959,727	823,452	886,718	1,070,841	1,335,406
Queensland	610,110	502,012	586,834	737,691	948,271
South Australia	249,729	223,355	236,179	287,941	350,234
Western Australia ..	274,995	204,580	228,755	292,766	387,998
Tasmania	84,832	74,360	72,760	95,712	121,002
Total	3,465,517	3,042,420	3,348,531	4,138,802	5,278,548

(*d*) *Land Tax.* All the States impose a land tax, Queensland, the last State to fall into line, collecting its first levy in 1915–16. In the other States the impost is of long standing. In New South Wales the State land tax is levied on the unincorporated portion of the Western Division of the State only.

The following table shows the amounts collected by means of such taxes during the years 1938–39 and 1943–44 to 1946–47 :—

STATE LAND TAX : NET COLLECTIONS.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	2,154	3,140	2,283	2,326	2,180
Victoria	482,336	359,983	357,603	321,299	382,599
Queensland	401,682	387,475	383,220	375,404	375,303
South Australia	321,482	297,303	289,738	288,676	286,481
Western Australia ..	114,623	121,808	118,134	111,353	111,920
Tasmania	85,069	92,532	91,493	90,789	91,759
Total	1,407,346	1,262,241	1,242,471	1,189,847	1,250,242

(*e*) *Income Taxes.* State taxes levied on incomes prior to the introduction of the Uniform Tax Scheme in 1942–43 were as follows :—

New South Wales—Income Tax, Super Tax and Further Tax on Undistributed Income of Companies ;
Victoria—Income Tax, Special Income Tax, and Unemployment Relief Tax ;
Queensland—Income Tax, Super Tax, Additional Tax and Income (State Development) Tax ;
South Australia—Income Tax ;
Western Australia—Income Tax, Hospital Tax and Gold Mining Profits Tax ;
Tasmania—Income Tax.

Some details of these taxes are given in earlier issues of this Year Book.

When the Uniform Tax Scheme was introduced in 1942–43 these taxes, together with the Commonwealth War Tax, were discontinued, and the Commonwealth Income Tax rates were increased to raise the revenue previously raised by these taxes. The States are reimbursed by the Commonwealth for the revenue lost to them by the discontinuance of these taxes. Details of these reimbursement grants are given on page 635.

In the following table total State collections of the taxes mentioned above are shown for the year 1938–39. For the years 1943–44 to 1946–47 the total of Commonwealth Reimbursements and arrears of State taxes collected are shown.

STATE INCOME AND DIVIDEND TAXES : NET COLLECTIONS.

State.	1938–39.	1943–44. (*a*)	1944–45. (*a*)	1945–46. (*a*)	1946–47 (*b*)
	£	£	£	£	£
New South Wales ..	12,703,150	15,356,000	15,356,000	15,356,000	16,472,691
Victoria	6,250,508	6,517,000	6,517,000	6,517,000	8,860,000
Queensland	5,608,603	5,821,000	5,821,000	5,821,000	6,601,000
South Australia	2,102,928	2,361,000	2,361,000	2,361,000	3,458,000
Western Australia ..	2,338,616	2,546,000	2,546,000	2,546,000	3,384,000
Tasmania	787,396	892,531	886,953	895,754	1,218,778
Total	29,791,201	33,493,531	33,487,953	33,496,754	39,994,469

(*a*) Includes revenue received under the State Grants (Income Tax Reimbursement) Act 1942
(*b*) Includes revenue received under State Grants (Tax Reimbursement) Act 1946.

(*f*) *Motor Taxation.* Motor taxation comprises tax and registration fees on motor vehicles, and licences of motor dealers, motor drivers and motor cycle riders, and public vehicles except when controlled by local government authorities. The following table shows the collections for the five years 1938–39 and 1943–44 to 1946–47 :—

MOTOR TAXATION : NET COLLECTIONS.

State.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£	£	£	£	£
New South Wales ..	2,762,678	2,326,186	2,370,442	2,618,341	2,937,588
Victoria..	1,913,689	1,582,439	1,655,159	1,846,937	2,093,747
Queensland	939,757	807,844	834,153	960,698	1,068,979
South Australia	715,944	571,928	601,896	650,946	737,371
Western Australia ..	453,053	380,780	358,672	393,068	429,009
Tasmania	175,591	214,750	225,986	247,805	280,690
Total	6,960,712	5,883,927	6,046,308	6,717,795	7,547,384

Except in the case of South Australia, the proceeds of motor tax and motor registration fees are paid into special funds and the amounts do not appear in the Consolidated Revenue Funds.

(iii) *Business Undertakings.* (*a*) 1946–47. A very large proportion of State gross revenues is made up of receipts from business undertakings under the control of the Governments. The principal of these are railways and tramways, harbour works, water supply and sewerage and electricity supply, and, in addition, State batteries for the treatment of auriferous ores are included for Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1946–47 the revenue from these sources was £78,433,777 or 45.5 per cent. of the revenue from all sources. Details of revenue are as follows :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1946–47.

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(*a*).	Total
	£	£	£	£	£	£	£
Railways	(*b*)30,384,710	(*c*)13,785,516	10,549,827	4,767,915	3,979,404	..	63,467,372
Tramways and Omnibuses	6,105,785	(*d*)120,641	..	..	480,522	..	6,706,948
Harbours, Rivers, Lights	1,379,882	(*e*)223,228	..	742,785	277,007	..	2,622,902
Water Supply, Sewerage, Irrigation and Drainage ..	..	1,011,207	..	1,296,976	1,051,980	..	3,360,163
Electricity Supply ..	..	815,552	..	..	..	3,000	818,552
Other	(*f*)683,760	517,073	87	92,923	163,997	..	1,457,840
Total ..	38,554,137	16,473,217	10,549,914	6,900,599	5,952,910	3,000	78,433,777

(*a*) Tasmanian transport services are under the separate control of the Transport Commission (*b*) Excludes £800,000 contribution from Consolidated Revenue Fund in respect of losses on country developmental railways. (*c*) Includes electric tramways operated by the Railways Department (*d*) Tramway contribution to Consolidated Revenue. (*e*) Includes Harbour Trust Fund contribution £140,675. (*f*) Road Transport and Traffic Fund (*b*) 1938–39 *and* 1943–44 *to* 1946–47. Particulars of the revenue from business undertakings are given below :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS.(*a*)

Source.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	£'000.	£'000.	£'000.	£'000.	£'000.
Railways, Tramways and Omnibuses	48,154	83,580	77,071	73,441	70,174
Harbour Services.. ..	2,357	2,409	2,647	2,574	2,623
Water Supply, Sewerage, Irrigation and Drainage..	2,543	3,063	3,176	3,072	3,360
Other	2,625	2,890	3,001	2,902	2,277
Total	55,679	91,942	85,895	81,989	78,434

(*a*) *See* notes to previous table.

(iv) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of Crown lands for the year 1946–47 :—

STATE LAND REVENUE, 1946–47.

Source.	N.S.W.	Victoria.	Q'land.	S.Aust.	W.Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Sales ..	92,618	62,593	..	39,266	9,262	1,657	205,396
Conditional Purchases	479,453	..	..	8,498	148,413	6,189	642,553
Rentals ..	1,027,856	162,689	1,120,190	210,245	118,620	30,948	2,670,548
Forestry ..	236,102	567,446	402,341	..	235,812	70,570	1,512,271
Other ..	26,371	32,022	84,683	..	14,266	2,265	159,607
Total ..	1,862,400	824,750	1,607,214	258,009	526,373	111,629	5,190,375

(v) *Commonwealth Payments.* Commonwealth Payments to the States represent a considerable proportion of the States' Revenue. In 1946–47 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £51,796,760 (30 per cent.). This was made up of the contribution towards interest on States' debts under the Financial Agreement, £7,584,912, special grants to the States of South Australia, Western Australia and Tasmania, £4,748,000 and Tax Reimbursement Grants £39,463,848. The latter item has been included under State taxation above as it is paid to the States as a reimbursement for vacating the field of income taxation.

In addition to these, the States receive a number of other payments which are paid to Trust Funds. The main items in this class are the contribution towards the sinking fund on States' debts (£1,636,120 in 1946–47) paid to the National Debt Sinking Fund and grants for Federal Aid Roads and Works (£4,805,290 in 1946–47) paid to State Trust Funds.

More detailed information concerning Commonwealth payments to the States is given under part A of this Chapter, Division IV., page 633.

(vi) *Interest and Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. In 1946–47 interest, mainly from loans to local governing bodies and on public account balances, supplied £4,525,312 whilst "Miscellaneous" revenue which includes fines of the courts and fees for services amounted to £11,144,679.

Division II.—Expenditure.

1. **General.**—The principal heads of State expenditure from Consolidated Revenue Funds are :—

> (*a*) Interest, sinking fund and exchange charges in connexion with public debt ; (*b*) Working expenses of railways, tramways and other business and industrial undertakings ; (*c*) Education ; (*d*) Health and charitable expenditure ; (*e*) Justice ; (*f*) Police ; (*g*) Penal establishments ; and (*h*) all other expenditure, under which heading is included Public Works, Lands and Surveys, Agriculture and Forestry, Legislative and General Administration. Pensions and Miscellaneous.

In earlier years the working expenses of Railways and Tramways were the most important item of State Governmental expenditure, but, for a period prior to 1941–42 Public Debt charges were the heaviest item. Since then, however, Railways and Tramways expenditure has again taken the major place. In the year 1946–47 the working expenses of the Railways and Tramways and Omnibuses were 36.4 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were Public Debt Charges, 23.1 per cent.; Education, 11.8 per cent.; Charitable, Public Health and Hospitals, 8.3 per cent.; and Law, Order and Public Safety, 4.9 per cent.

2. **Total Expenditure.**—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the five years 1938–39 and 1943–44 to 1946–47 are shown in the following table :—

STATE EXPENDITURE : CONSOLIDATED REVENUE FUNDS.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39	54,169	27,773	19,316	12,701	11,170	3,641	128,770
1943–44	71,288	34,924	28,854	15,529	13,551	3,469	167,615
1944–45	73,245	34,924	25,878	16,113	13,949	3,676	167,785
1945–46	71,488	35,185	24,760	16,343	14,408	4,034	166,218
1946–47	75,350	37,354	25,017	17,253	15,029	4,573	174,576

PER HEAD OF POPULATION.(*b*)

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1938–39	19	16	0	14	16	8	19	3	3	21	6	10	23	18	5	15	6	5	18	12	5
1943–44	24	16	6	17	12	4	27	7	2	25	4	0	28	6	6	14	4	2	23	2	7
1944–45	25	4	10	17	9	6	24	4	5	25	17	1	28	15	5	14	17	8	22	18	2
1945–46	24	7	6	17	9	1	22	16	10	25	18	0	29	7	11	16	2	4	22	9	0
1946–47	25	8	6	18	6	3	22	16	0	26	18	9	30	4	6	17	19	3	23	5	11

(*a*) *See* § 1, par. 2, page 657. (*b*) Based on mean population of each financial year.

3. **Details of Expenditure.**—(i) 1946–47. The following table shows the total expenditure and expenditure per head for each of the principal items :—

STATE EXPENDITURE : DETAILS, 1946–47.

Particulars.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	Total.
	£	£	£	£	£	£	£
Public debt (interest, sinking fund, exchange, etc.) ..	14,840,967	8,215,575	6,312,519	5,166,400	4,403,034	1,386,521	40,325,016
Railways, Tramways and Omnibuses (working expenses)	31,785,491	12,373,524	9,755,203	4,847,897	4,783,142	5,485	63,550,742
Harbours and Rivers, etc.	702,833	127,805	..	327,226	96,989	..	1,254,853
Water Supply, Sewerage, Irrigation and Drainage ..	..	1,016,974	..	640,698	477,296	..	2,134,968
Other Business and Industrial Undertakings	683,760	566,397	3,610	103,446	259,360	(*b*)251,911	1,868,484
Education.. ..	8,767,919	5,215,761	2,750,211	1,733,506	1,389,041	814,545	20,670,983
Health and charitable	6,321,538	3,374,521	1,853,644	1,255,271	946,650	685,565	14,437,189
Justice	796,314	413,392	315,756	113,868	125,586	62,896	1,827,812
Police	2,026,621	1,286,854	937,951	419,729	334,427	168,500	5,174,082
Penal establishments	547,034	173,374	80,145	67,741	58,620	37,741	964,655
Public safety ..	210,736	154,629	111,770	12,857	37,220	10,660	537,872
All other expenditure	8,666,866	4,435,095	2,896,466	2,564,400	2,117,062	1,149,488	21,829,377
Total ..	75,350,079	37,353,901	25,017,275	17,253,039	15,028,427	4,573,312	174,576,033

(*a*) *See* § 1, par. 2, page 657. (*b*) Includes £251,721 Transport Commission loss.

STATE EXPENDITURE: DETAILS, 1946–47—*continued.*

PER HEAD OF POPULATION.(a)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public debt (interest, sinking fund, exchange, etc.) ..	5 0 2	4 0 7	5 15 1	8 1 4	8 17 1	5 8 11	5 7 8
Railways, Tramways and Omnibuses (working expenses)	10 14 6	6 1 4	8 17 10	7 11 5	9 12 5	0 0 5	8 9 7
Harbours and Rivers, etc.	0 4 9	0 1 3		0 10 3	0 3 11		0 [illegible] 4
Water Supply, Sewerage, Irrigation and Drainage ..	..	0 10 0	..	1 0 0	0 19 2	..	0 5 8
Other Business and Industrial Undertakings	0 4 7	0 5 7	0 0 1	0 3 3	0 10 5	0 19 9	0 5 0
Education	2 19 2	2 11 2	2 10 1	2 14 1	2 15 11	3 4 0	2 15 2
Health and charitable	2 2 8	1 13 1	1 13 9	1 19 2	1 18 1	2 13 10	1 18 6
Justice	0 5 5	0 4 0	0 5 9	0 3 7	0 5 1	0 4 11	0 4 11
Police	0 13 8	0 12 7	0 17 1	0 13 1	0 13 5	0 13 3	0 13 10
Penal establishments	0 3 8	0 1 8	0 1 6	0 2 1	0 2 4	0 3 0	0 2 7
Public safety ..	0 1 5	0 1 6	0 2 0	0 0 5	0 1 6	0 0 10	0 1 5
All other expenditure	2 18 6	2 3 6	2 12 10	4 0 1	4 5 2	4 10 4	2 18 3
Total ..	25 8 6	18 6 3	22 16 0	26 18 9	30 4 6	17 19 3	23 5 11

(*a*) Based on mean population of financial year.

(ii) 1938–39 *and* 1943–44 *to* 1946–47. Expenditure for the years 1938–39 and 1943–44 to 1946–47 are shown in the following table :—

STATE EXPENDITURE.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£'000.	£'000.	£'000.	£'000.	£'000.
Public debt (interest, sinking fund, exchange, etc.)	40,158	42,144	46,030	40,949	40,325
Railways, Tramways and Omnibuses (working expenses)	38,541	67,427	62,647	61,852	63,551
Harbours and Rivers, etc.	603	893	906	1,136	1,255
Water Supply, Sewerage, Irrigation and Drainage	1,076	1,511	1,782	2,124	2,135
Other Business and Industrial Undertakings	1,646	2,176	2,218	2,406	1,868
Education	12,639	14,657	15,694	17,336	20,671
Health and Charitable .. .	15,307	11,650	11,894	12,766	14,437
Justice	1,323	1,329	1,373	1,518	1,828
Police	3,733	4,338	4,372	4,589	5,174
Penal establishments	646	815	880	929	965
Public safety	297	1,017	552	477	538
All other expenditure ..	12,711	19,658	19,437	20,136	21,829
Total	128,770	167,615	167,785	166;218	174,576

Division III.—Surplus Revenue.

The following table shows for each of the years 1938–39 and 1943–44 to 1946–47 the total amount and amount per head of the surplus or deficit of each State :—

STATE SURPLUS REVENUE.

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	−2,459	−787	14	−397	−221	−26	−3,876
1943–44 ..	1,183	620	114	16	38	30	2,001
1944–45 ..	968	349	569	..	5	−19	1,872
1945–46 ..	371	6	14	..	..	−101	290
1946–47 ..	−1,850	5	16	−60	−48	−66	−2,003

PER HEAD OF POPULATION.(b)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1938–39 ..	−0 18 0	−0 8 5	0 0 3	−0 13 4	−0 9 5	−0 2 3	−0 11 3
1943–44 ..	0 8 2	0 6 3	0 2 2	0 0 6	0 1 7	0 2 5	0 5 6
1944–45 ..	0 6 8	0 3 6	0 10 7	..	0 0 2	−0 1 6	0 5 2
1945–46 ..	0 2 6	0 0 1	0 0 3	..	..	−0 8 1	0 0 9
1946–47 ..	−0 12 6	..	0 0 4	−0 1 11	−0 1 11	−0 5 2	−0 5 4

(a) *See* § 1, para. 2, page 657. (b) Based on mean population of each financial year.
NOTE.—Minus sign (−) indicates deficit.

§ 3. State Trust Funds.

In addition to the moneys received as revenue and paid to the credit of Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held on 30th June, 1947 were as follows :—

STATE TRUST FUND BALANCES, 30th JUNE, 1947.

Particulars	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Amount of trust funds .	23,753	18,880	30,525	2,352	8,082	923	84,515

(a) Special Deposits Account and Special Accounts.

§ 4. State Loan Funds.

Division I.—Loan Expenditure.

1. **General.**—As far back as 1842 revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2¾d. to 5¼d. per £100 per diem, or

approximately from 4½ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

Statements relating to Loan Expenditure are given below for both "gross" and "net" expenditure. The gross expenditure represents the amounts disbursed during each year, whereas the net expenditure represents the gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets, and transfers from other funds. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made.

2. **Details of Loan Expenditure.**—(i) *Gross Loan Expenditure*, 1946–47. Particulars of the gross loan expenditure on Works, Services, etc., for the year 1946–47 are given in the following table :—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC. 1946–47.

Heads of Expenditure.	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Public Works and Services—							
Railways	3,200,000	433,979	428,415	576,675	268,379	294,486	5,201,934
Tramways and Omnibuses	479,850	..	..	..	3,273	..	483,123
Roads	400,500	25,042	546,253	..	..	28,529	1,812,594
Bridges		67,894					
Harbours and Rivers ..	500,614	30,415	39,382	87,332	86,633		
Lights and Lighthouses ..	..	..	..		..		
Water Supply	71,516	1,466,122	90,000	862,399	273,108	..	3,062,522
Sewerage		..	..	183,480	115,897	..	
Electricity Supply ..	145,676	..	..	1,000,000	166,054	724,250	2,035,980
Public Buildings ..	1,025,348	797,617	791,714	246,705	387,045	227,781	3,476,210
Loans and Grants to Local Bodies	6,012	33,616	592,509	..	..	..	632,137
Unemployment Relief Works	..	..	..	..	..	450	450
Housing	7,513	528,562	111,070	1,320,593	..	105,067	2,072,805
Other Public Works, etc.	466,975	61,838	..	15,952	37,690	291,023	873,478
Primary Production—							
Soldier Settlement ..	1,656,957	2,226,665	1,536	7,565	..	188,342	4,442,960
Land for Settlement ..			85,261	258,904	..	17,730	
Advances to Settlers ..	..	99,253	258	23,395	..	169,447	292,353
Water Conservation ..	1,020,231	..	129,632	6,288	7,338	..	1,597,359
Irrigation and Drainage ..				88,822	345,048	..	
Rabbit-proof Fencing ..	..	..	..	(*b*)	..	..	..
Agriculture (*c*) ..	105,000	..	400,000	..	10,613	..	515,613
Agricultural Bank ..	..	..	799,000	..	..	..	799,000
Forestry	..	1,329,450	474,229	317,411	..	..	2,121,090
Mines and Mineral Resources	15,822	197	42,404	150,000	257,257	..	465,680
Other	..	10,230	..	..	36,301	8,565	55,096
Other Purposes	..	..	..	159,853	236,328	..	396,181
Total Public Works, Services, etc., Expenditure	9,102,014	7,110,880	4,531,663	5,305,374	2,230,964	2,055,670	30,336,565
Per Head of Population	£3 1 5	£3 9 9	£4 2 7	£8 5 8	£4 9 9	£8 1 6	£4 1 0

(*a*) Expenditure from Loan Funds and on account of Loans ; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (*b*) Included with Advances to Settlers. (*c*) Includes Grain Elevators, New South Wales and Victoria.

(ii) *Net Loan Expenditure*, 1946–47. For the year ended 30th June, 1947, State net loan expenditure on Works, Services, etc., was as follows :—

STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1946–47.

Heads of Expenditure.	N.S.W.	Victoria. (*a*)	Q'land.	S.Aust. (*b*)	W.Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Public Works and Services—							
Railways	3,103,313	428,640	400,603	558,393	264,467	197,760	4,953,176
Tramways and Omnibuses	470,701	..	..	(*c*) −50,000	3,273	..	423,974
Roads	347,678	−1,095	400,269	−17,000	..	22,611	1,473,244
Bridges		26,442					
Harbours and Rivers ..	467,549	26,773	37,739	75,842	86,436		
Lights and Lighthouses..	..	..	..		..		
Water Supply	55,600	1,458,913	90,000	806,780	269,519	..	2,953,576
Sewerage		−1,251	..	168,530	105,485	..	
Electricity Supply ..	89,962	..	..	1,000,000	166,054	427,126	1,683,142
Public Buildings ..	1,019,298	783,635	784,351	242,561	386,101	220,041	3,435,987
Loans and Grants to Local Bodies	357	30,743	134,053	−2,540	−284	−18,778	143,551
Unemployment Relief Works	−80,838	−34,449	..	..	..	−686	−115,973
Housing	−3,254	152,310	2,470	912,147	−1,569	9,631	1,071,735
Other Public Works, etc.	466,813	61,838	− 120	−22,590	37,685	−22,385	521,241
Primary Production—							
Soldier Settlement ..	1,656,251	1,128,762	−51,795	−144,706	−44,142	21,299	2,484,052
Land for Settlement ..			76,803	−84,333	−57,415	−16,672	
Advances to Settlers ..	..	13,109	−31,292	−58,648	−843	−13,550	−91,224
Water Conservation ..	925,591	..	114,443	5,468	7,104	..	1,466,045
Irrigation and Drainage..				68,806	344,633	..	
Rabbit-proof Fencing ..	..	−8,759	−17,264	(*d*)	..	..	−26,023
Agriculture (*e*) ..	105,000	..	399,751	..	8,353	..	513,104
Agricultural Bank ..	..	..	750,996	..	−37,769	..	713,227
Forestry	..	1,045,683	474,217	−30,184	− 1	..	1,489,715
Mines and Mineral Resources	15,742	−5,035	39,154	150,000	253,830	..	453,691
Other..	..	−14,997	−25,478	−2,742	34,763	1,588	−6,866
Other Purposes	..	..	−105	52,036	217,947	..	269.878
Total Public Works, Services, etc., Expenditure	8,639,763	5,091,262	3,578,795	3,627,820	2,043,627	827,985	23,809,252
Per Head of Population..	£2 18 4	£2 9 11	£3 5 3	£5 13 3	£4 2 2	£3 5 1	£3 3 7

(*a*) Expenditure from Loan Funds and on account of Loans ; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (*b*) Credits arising from the cancellation of securities redeemed from Sinking Fund are not included. (*c*) Loans to Municipal Tramways Trust. (*d*) Included in Advances to Settlers. (*e*) Includes Grain Elevators, New South Wales and Victoria.

3. Loan Expenditure on Works, Services, etc., 1938–39 and 1943–44 to 1946–47.—

(i) *Gross Loan Expenditure*. Gross loan expenditure on works, etc. for the years 1938–39 and 1943–44 to 1946–47 is shown in the following table :—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	8,789	3,218	3,393	2,529	1,783	1,687	21,399
1943–44 ..	3,029	1,085	1,773	2,104	362	1,360	9,713
1944–45 ..	3,139	3,683	1,561	2,621	748	1,261	13,013
1945–46 ..	4,554	2,204	2,409	2,494	1,096	1,523	14,280
1946–47 ..	9,102	7,111	4,532	5,305	2,231	2,056	30,337

(*a*) *See* footnote (*a*) to previous table.

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.—*continued*

PER HEAD OF POPULATION.

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
1938–39 ..	3 4 3	1 14 5	3 7 4	4 5 0	3 16 4	7 2 0	3 1 11
1943–44 ..	1 1 1	0 10 11	1 13 7	3 8 3	0 15 2	5 11 5	1 6 10
1944–45 ..	1 1 8	1 16 10	1 9 3	4 4 1	1 10 10	5 2 2	1 15 6
1945–46 ..	1 11 1	1 1 10	2 4 5	3 19 1	2 4 9	6 1 8	1 18 7
1946–47 ..	3 1 5	3 9 9	4 2 7	8 5 8	4 9 9	8 1 6	4 1 0

(a) *See* footnote (a) to previous table.

(ii) *Net Loan Expenditure.* The following table shows the works net loan expenditure during each of the years 1938–39 and 1943–44 to 1946–47 :—

STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000
1938–39 ..	5,408	2,290	2,041	1,226	1,636	577	13,178
1943–44 ..	1,411	128	345	476	106	499	2,965
1944–45 ..	1,723	2,083	431	983	547	372	6,139
1945–46 ..	3,263	39	1,292	1,053	812	560	7,019
1946–47 ..	8,640	5,091	3,579	3,628	2,043	828	23,809

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
1938–39 ..	1 19 0	1 4 6	2 0 6	2 1 2	3 10 1	2 8 7	1 18 1
1943–44 ..	0 9 10	0 1 3	0 6 7	0 15 5	0 4 5	2 1 10	0 8 2
1944–45 ..	0 11 11	1 0 10	0 8 1	1 11 7	1 2 7	1 10 1	0 16 9
1945–46 ..	1 2 3	0 0 5	1 3 10	1 13 4	1 13 2	2 4 9	0 19 0
1946–47 ..	2 18 4	2 9 11	3 5 3	5 13 3	4 2 2	3 5 1	3 3 7

(a) *See* footnotes (a) and (b) to table in par. 2 (ii) above.

The four tables in this paragraph and paragraph 2 do not include particulars of expenditure on loan discounts and flotations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. The aggregate net expenditure on those items to 30th June, 1947, is shown in paragraph 4 following. Summaries of the gross and net expenditure and repayments for the years 1944–45 to 1946–47 are shown in paragraph 5 following.

4. **Total Net Loan Expenditure to 30th June, 1947.**—The total net loan expenditure including revenue deficits, etc., of the States from the initiation of borrowing to 30th June, 1947 amounted to £1,102,308,033. The purposes for which this sum was expended are shown in the following table :—

STATE NET LOAN EXPENDITURE TO 30th JUNE, 1947.

Heads of Expenditure.	N.S.W.	Victoria.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services—	£	£	£	£	£	£	£
Railways.. ..	165,216,060	80,582,589	67,936,837	38,443,870	26,131,581	8,205,749	386,516,686
Tramways and Omnibuses ..	8,537,491	..	..	(*b*) 3,414,982	1,364,919	..	13,317,392
Roads and Bridges	21,444,874	12,759,455	6,254,382	3,792,145	3,183,327	7,512,228	99,567,537
Harbours, Rivers, Lighthouses ..	23,163,012	1,446,935	3,635,677	8,706,677	7,668,825		
Water Supply ..	41,162,908	34,012,627	1,099,741	20,825,343	11,218,883	..	117058760
Sewerage.. ..		220,453	..	4,256,130	4,262,675	..	
Electricity Supply..	2,979,976	17,839,227	..	1,000,000	2,200,222	8,845,816	32,865,241
Public Buildings ..	19,969,433	10,325,759	9,065,839	4,522,409	3,599,210	3,413,941	50,896,591
Loans and Grants to Local Bodies ..	1,774,787	1,659,993	19,237,254	11,282	86,710	280,573	23,050,599
Unemployment Relief Works ..	16,354,984	13,147,158	..	..	(*c*)	330,770	29,832,912
Housing (*d*) ..	1,784,942	2,493,847	4,151,274	6,644,629	789,206	478,515	16,342,413
Commonwealth Services	3,964,491	..	524,388	1,283,387	..	500,754	6,273,020
Other Public Works and Services (*e*)	4,505,111	791,379	2,916,801	1,082,491	1,925,612	2,479,330	13,700,724
Primary Production—							
Closer Settlement ..	*g*13,868,506		(*f*)933,316	1,576,414	8,461,505	317,499	89,939,663
Land for Settlement		43,866,977	3,441,626		324,662	..	
Soldier Settlement			888,826	7,767,967	6,500,234	1,992,131	
Advances to Settlers	288,075	3,530,518	195,297	1,752,622	2,060,296	165,201	7,992,009
Water Conservation	20,771,321	..	2,068,376	4,252,695	1,390,347	..	36,598,412
Irrigation and Drainage				5,158,334	2,957,339	..	
Rabbit-proof Fencing	..	885,729	185,889	(*h*)	341,765	..	1,413,383
Agriculture (*i*) ..	7,316,080	1,150,682	449,351	..	3,861,795	..	12,777,908
Agricultural Bank..	..	..	2,326,648	..	5,806,910	..	8,133,558
Forestry	..	4,428,570	1,918,823	1,161,286	1,041,917	..	8,550,596
Mines and Mineral Resources ..	624,766	592,086	2,142,355	400,000	3,701,180	..	7,460,387
Other	..	1,117,099	2,545,720	761,505	191,108	20,692	4,636,124
Other Purposes ..	89,283	450,950	123,423	(*j*) 2,271,691	3,983,338	..	6,918,685
Total Public Works, Services, etc., Expenditure ..	353,816,100	231,302,033	132,041,843	119,085,859	103,053,566	34,543,199	973,842,600
Other than Works, etc.—							
Discounts and Flotation Expenses ..	20,842,336	7,213,816	10,159,499	2,576,426	5,391,210	1,596,521	47,779,808
Revenue and General Cash Deficits ..	38,948,098	9,118,682	5,826,271	8,669,234	12,115,087	1,701,103	76,378,475
Treasury Bills Retired	..	..	2,857,150	..	..	..	2,857,150
Other	..	..	(*k*) 1,450,000	..	..	..	1,450,000
Grand Total ..	413,606,534	247,634,531	152,334,763	130,331,519	120,559,863	37,840,823	1,102,308,033

(*a*) Aggregate *Gross* Loan Expenditure. (*b*) Loans to Municipal Tramways Trust. (*c*) Not available separately. Distributed under various particular headings. (*d*) Expenditure from Commonwealth Loans under Commonwealth-State Housing Agreement has been excluded. (*e*) Includes Industrial Undertakings and Immigration. (*f*) Under Prickly Pear Land Act. (*g*) Includes advances for Rabbit-proof Fencing. (*h*) Included with Advances to Settlers. (*i*) Includes Grain elevators, New South Wales and Victoria. (*j*) Includes £1,710,032 State Bank. Expenditure on stores for public works amounting to £1.4 million, previously included under this item, is now included under the works concerned. (*k*) Contribution to Sinking Fund.

The figures in the foregoing table show the amounts actually expended from loan fund, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still outstanding. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. As in the earlier tables on net loan expenditure, allowance has been made, however, for credits on account of repayments of advances to local government bodies, settlers, etc., the sale of assets, and transfers from other funds. In the public debt statement, on the other hand, loans repaid are not included, and in the case of loans still outstanding, each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

5. **Total Loan Expenditure, 1944–45 to 1946–47.**—The following table gives particulars, in summary form, of the total loan expenditure in each State during each of the years 1944–45 to 1946–47.

STATE LOAN EXPENDITURE, SUMMARY.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1944–45.							
Works and Services—	£	£	£	£	£	£	£
Gross Expenditure ..	3,138,747	3,683,342	1,560,898	2,620,483	747,864	1,261,595	13,012,929
Net Expenditure ..	1,722,813	2,083,567	431,010	982,439	546,902	372,276	6,139,007
Repayments	1,415,934	1,599,775	1,129,888	1,638,044	200,962	889,319	6,873,922
Other than Works, etc. (*a*)—							
Gross Expenditure ..	7,492,906	4,255,000	7,715	9,634	75,961	455,000	12,296,216
Net Expenditure ..	7,492,906	4,255,000	−3,974	5,500	69,848	455,000	12,274,280
Repayments	..	..	(*b*) 11,689	4,134	6,113	..	21,936
Total Loan Expenditure—							
Gross	10,631,653	7,938,342	1,568,613	2,630,117	823,825	1,716,595	25,309,145
Net	9,215,719	6,338,567	427,036	987,939	616,750	827,276	18,413,287
Repayments	1,415,934	1,599,775	1,141,577	1,642,178	207,075	889,319	6,895,858
1945–46.							
Works and Services—	£	£	£	£	£	£	£
Gross Expenditure ..	4,554,301	2,204,134	2,408,667	2,494,267	1,096,035	1,523,003	14,280,407
Net Expenditure ..	3,263,128	39,046	1,292,171	1,052,537	812,263	559,428	7,018,573
Repayments	1,291,173	2,165,088	1,116,496	1,441,730	283,772	963,575	7,261,834
Other than Works, etc. (*a*)—							
Gross Expenditure ..	639,266	1,313,647	1,863,944	1,294,089	1,214,300	..	6,325,246
Net Expenditure ..	639,266	1,313,647	1,836,539	1,294,032	1,211,029	..	6,294,513
Repayments	..	..	27,405	57	(*b*) 3,271	..	30,733
Total Loan Expenditure—							
Gross	5,193,567	3,517,781	4,272,611	3,788,356	2,310,335	1,523,003	20,605,653
Net	3,902,394	1,352,693	3,128,710	2,346,569	2,023,292	559,428	13,313,086
Repayments	1,291,173	2,165,088	1,143,901	1,441,787	287,043	963,575	7,292,567
1946–47.							
Works and Services—	£	£	£	£	£	£	£
Gross Expenditure ..	9,102,014	7,110,880	4,531,663	5,305,374	2,230,964	2,055,670	30,336,565
Net Expenditure ..	8,639,763	5,091,262	3,578,795	3,627,820	2,043,627	827,985	23,809,252
Repayments	462,251	2,019,618	952,868	1,677,554	187,337	1,227,685	6,527,313
Other than Works, etc. (*a*)—							
Gross Expenditure—							
Discounts and Flotation Expenses	466,934	6,203	1,195,228	9,747	17,689	..	1,695,801
Revenue and General Cash Deficits ..	..	..	..	..	..	119,625	119,625
Contribution to Sinking Fund	..	..	150,000	..	..	..	150,000
Total	466,934	6,203	1,345,228	9,747	17,689	119,625	1,965,426
Net Expenditure—							
Discounts and Flotation Expenses	466,934	6,203	1,143,392	5,449	14,524	..	1,636,502
Revenue and General Cash Deficits ..	..	..	..	..	..	119,625	119,625
Contribution to Sinking Fund	..	..	150,000	..	..	..	150,000
Total	466,934	6,203	1,293,392	5,449	14,524	119,625	1,906,127
Repayments	..	..	51,836	4,298	3,165	..	59,299
Total Loan Expenditure—							
Gross	9,568,948	7,117,083	5,876,891	5,315,121	2,248,653	2,175,295	32,301,991
Net ..	9,106,697	5,097,465	4,872,187	3,633,269	2,058,151	947,610	25,715,379
Repayments	462,251	2,019,618	1,004,704	1,681,852	190,502	1,227,685	6,586,612

(*a*) Includes exchange, discounts and flotation expenses, revenue and general cash deficits. (*b*) From Consolidated Revenue Fund.

Division II.—State Public Debts.

1. **General.**—The first government loan raised in Australia was obtained by New South Wales in 1842. This and nine other loans prior to 1855 were all raised locally. In 1855 New South Wales approached the London market for the first instalment of a 5 per cent. loan for £683,300. Victoria first appeared as a borrower in 1854, and made its first appearance on the London market in 1859. The first public loans were raised by the other States in the following years :—Queensland 1861, South Australia 1856, Western Australia 1845, and Tasmania 1867.

In the public debt tables which follow, the units of currency are, for debts maturing and interest payable in Australia, £ Australian ; in London, £ sterling ; in New York, £ sterling. The New York debt is payable in dollars, but for the purposes of the tables dollars have been arbitrarily converted to £ sterling at the rate of $4.8665 to £ stg. 1.

Particulars of State debt in Australian currency are given in Section C, Commonwealth and State Finance, par. 3 of this Chapter (see page 682.)

2. **State Debts 1938–39 and 1943–44 to 1946–47.**—The table hereunder shows the State public debts and the amounts outstanding per head of population at 30th June, 1939, and 1944 to 1947 inclusive.

Under the Financial Agreement the Commonwealth Government on 1st July, 1929 assumed the liabilities of the States to bondholders in respect of the debts of the States existing at 1st July, 1929, and taken over by the Commonwealth. The following figures represent the total " face " or " book " values of the debts of the States leaving out of account currency changes since the loans were floated :—

STATE PUBLIC DEBTS.

30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
1939.. ..	359,843,990	179,698,118	127,503,251	108,887,092	95,472,600	26,366,990	897,772,041
1944.. ..	351,971,024	174,762,413	129,179,046	108,305,240	96,478,295	30,063,802	890,759,820
1945.. ..	355,050,980	179,405,191	131,433,390	108,870,912	95,894,885	30,322,355	900,977,713
1946.. ..	353,239,936	179,727,273	133,294,729	110,748,786	96,925,931	31,414,101	905,350,756
1947.. ..	362,027,630	183,096,252	135,355,499	114,134,262	99,002,301	32,632,964	926,248,908

PER HEAD OF POPULATION.(a)

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1939.. ..	130 18 2	95 13 3	125 5 4	182 10 7	203 1 7	111 0 10	129 3 9
1944.. ..	121 18 4	87 16 1	121 13 4	174 16 4	200 6 1	122 8 0	122 5 2
1945.. ..	121 12 10	89 7 5	122 0 8	173 10 5	196 11 4	121 19 2	122 5 11
1946.. ..	119 18 9	88 14 7	122 7 0	174 8 4	196 14 7	124 13 2	121 13 9
1947.. ..	121 5 3	89 1 9	122 7 1	176 12 5	196 18 7	126 18 5	122 12 8

(a) Based on population at 30th June in each year.

The public debt of the whole of the States increased during the period under review by £28.5 million. The debt per head of population decreased, however, during the period by £6 11s. 1d. to £122 12s. 8d. per head. During 1946–47 the total State debt increased by £20.9 million. In some States certain public utilities such as Tramways, Water Supply and Sewerage, and Harbour Services, etc., are controlled by Boards or Trusts, which, in addition to receiving advances from the Central Government, raise loans by public borrowing on their own behalf, while in other States these services are controlled by the Central Governments. Comparison of the debts of the States is therefore difficult, but on page 685 figures showing the aggregate debts of the States, including these local and semi-governmental bodies, are given for the years 1938–39, 1939–40, 1940–41 and 1946–47. Local and semi-governmental debt statistics are not available for the years 1941–42 to 1945–46.

3. **Place of Flotation of Loans.**—Early loans, usually for comparatively small amounts, were raised locally, but, with the increasing demand for loan funds and the more favourable terms offering in the London market, the practice of raising loans in London came into vogue, and for many years local flotations, except for short terms or small amounts, were comparatively infrequent. In more recent years, however, the accumulating stocks of money in Australia available for investment led to the placing of various redemption and other loans locally, with very satisfactory results. Loans have also been placed in New York on account of all States. The following table gives particulars of loans outstanding at 30th June, 1947, according to the place of flotation :—

STATE PUBLIC DEBTS AT 30th JUNE, 1947 : PLACE OF FLOTATION OF LOANS.

State.	Maturing Overseas.			Maturing in Australia.	Grand Total
	London.	New York.	Total Overseas.		
	£ Stg.	£ Stg.	£ Stg.	£ Aust.	£
New South Wales	144,675,312	11,438,200	156,113,512	205,914,118	362,027,630
Victoria	56,158,752	4,500,602	60,659,354	122,436,898	183,096,252
Queensland.. ..	47,325,537	4,886,339	52,211,876	83,143,623	135,355,499
South Australia ..	37,831,404	1,733,468	39,564,872	74,569,390	114,134,262
Western Australia ..	39,001,170	2,015,436	41,016,606	57,985,695	99,002,301
Tasmania	8,313,870	227,796	8,541,666	24,091,298	32,632,964
Total ..	333,306,045	24,801,841	358,107,886	568,141,022	926,248,908

PER HEAD OF POPULATION.

	£ s. d. Stg.	£ s. d. Stg.	£ s. d. Stg.	£ s. d. Aust.	£ s. d
New South Wales ..	48 9 3	3 16 7	52 5 10	68 19 5	121 5 3
Victoria	27 6 6	2 3 9	29 10 3	59 11 6	89 1 9
Queensland.. ..	42 15 7	4 8 4	47 3 11	75 3 2	122 7 1
South Australia ..	58 10 10	2 13 8	61 4 6	115 7 11	176 12 5
Western Australia ..	77 11 7	4 0 2	81 11 9	115 6 10	196 18 7
Tasmania .	32 6 8	0 17 9	33 4 5	93 14 0	126 18 5
Total ..	44 2 7	3 5 8	47 8 3	75 4 5	122 12 8

Particulars of the aggregate debts of the States for the five years 1938–39 and 1943–44 to 1946–47 showing the amounts which will mature overseas and in Australia, are shown on page 731.

4. **Interest.**—(i) *Amounts Payable and Average Rate.* The highest rate of interest paid for the earliest State loans was 5¼d. per £100 per diem, or, approximately, 8 per cent. per annum. At 30th June, 1947, the rates varied from 5.25 per cent. to 1 per cent The average rate payable on the aggregate indebtedness was £3 6s. 4d. per cent. For the separate States the average varied, being lowest for Western Australia (£3 5s. 2d.) and highest for Victoria (£3 8s. 2d.). The following table gives particulars of the amount of interest payable, together with the average rate of interest payable at 30th June, 1947. with separate information for London, New York and Australian maturities.

STATE PUBLIC DEBTS AT 30th JUNE, 1947 : INTEREST PAYABLE.

WHERE PAYABLE.

State.	Overseas.			Australia.	Grand Total
	London.	New York.	Total.		
	£ Stg.	£ Stg.	£ Stg.	£ Aust.	£
New South Wales ..	5,019,194	385,237	5,404,431	6,414,769	11,819,200
Victoria	1,874,010	212,639	2,086,649	4,153,388	6,240,037
Queensland	1,636,966	202,603	1,839,569	2,735,477	4,575,046
South Australia ..	1,223,758	86,674	1,310,432	2,482,814	3,793,246
Western Australia ..	1,244,012	100,771	1,344,783	1,880,437	3,225,220
Tasmania	295,196	11,390	306,586	769,326	1,075,912
Total ..	11,293,136	999,314	12,292,450	18,436,211	30,728,661

AVERAGE RATE PAYABLE.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
New South Wales ..	3 9 5	3 7 4	3 9 3	3 2 4	3 5 4
Victoria	3 6 9	4 14 6	3 8 10	3 7 10	3 8 2
Queensland	3 9 2	4 2 11	3 10 6	3 5 11	3 7 8
South Australia ..	3 4 8	5 0 0	3 6 3	3 6 7	3 6 6
Western Australia ..	3 3 10	5 0 0	3 5 7	3 4 10	3 5 2
Tasmania	3 11 0	5 0 0	3 11 9	3 3 10	3 5 11
Total ..	3 7 9	4 0 7	3 8 8	3 4 11	3 6 4

The average rate of interest on debt maturing in Australia has been reduced from £5 4s. 11d. per cent. in 1931 to £3 4s. 11d. per cent. in 1947. For debt maturing in London the average rate increased from £4 12s. 7d. per cent. in 1931 to £4 13s. 3d. per cent. in 1932, but, as a result of the conversions effected in London between 1932 and 1934 fell to £4 2s. 8d. per cent. in 1934, and subsequent conversions have reduced the rate to £3 7s. 9d. per cent. in 1947. New York loans have decreased from £5 2s. 6d. per cent. in 1931 to £4 0s. 7d. per cent. in 1947.

(ii) *Indebtedness at each Rate.* The following table shows, for the States combined, particulars of the total debt at each rate of interest and according to the domicile of the debt.

STATE PUBLIC DEBTS AT 30th JUNE, 1947: AMOUNTS AT EACH RATE OF INTEREST PAYABLE.

Rate of Interest.	Maturing in—			
	London.	New York.	Australia.	Total.
%	£ Stg.	£ Stg.	£ Aust.	£
5.25	17,870,500	..	..	17,870,500
5.0375	..	..	250,510	250,510
5.0	1,000	9,905,714	..	9,906,714
4.0	41,283,652	..	98,810,385	140,094,037
3.875	..	..	65,622,529	65,622,529
3.75	24,649,682	..	44,699,950	69,349,632
3.625	..	..	5,117,550	5,117,550
3.5	90,579,800	5,115,586	1,313,146	97,008,532
3.4875	..	..	4,665,716	4,665,716
3.375	..	5,691,154	12,104,460	17,795,614
3.25	59,697,638	4,089,387	188,408,606	252,195,631
3.125	..	..	19,709,030	19,709,030
3.1	..	..	4,276,160	4,276,160
3.0	41,763,195	..	34,285,638	76,048,833
2.75	16,074,596	..	..	16,074,596
2.7125	..	..	591,966	591,966
2.5	18,516,192	..	37,353,145	55,869,337
2.325	..	..	1,797,227	1,797,227
2.25	(a) 21,376,840	..	..	21,376,840
2.0	(a) 1,491,000	..	6,474,850	7,965,850
1.5	..	..	991,379	991,379
1.0	..	..	41,668,515	41,668,515
Overdue	1,950	..	260	2,210
Total Debt ..	333,306,045	24,801,841	568,141,022	926,248,908

(a) Short-term debt.

(iii) *Variations from* 1901 *to* 1947. The variations in the rates of interest payable on the public debts of the States are shown in the following table which gives the percentages of the total debts in various interest groups during the years specified, and the average rate of interest in each year :—

STATE PUBLIC DEBTS: PERCENTAGES, ETC., IN VARIOUS INTEREST GROUPS.

Interest Rates.	Percentage of Total Debt at 30th June—							
	1901.	1911.	1921.	1931.	1941.	1945.	1946.	1947
	%	%	%	%	%	%	%	%
Not exceeding 3 per cent.	18.0	17.9	10.2	5.3	18.5	21.5	23.2	24.0
Exceeding 3 per cent. but not exceeding 4 per cent.	78.5	81.9	45.4	17.2	63.6	64.8	72.0	73.0
Exceeding 4 per cent. but not exceeding 5 per cent.	3.1	0.1	15.6	36.8	15.5	11.4	2.6	1.1
Exceeding 5 per cent. but not exceeding 6 per cent.	0.4	0.1	23.5	38.4	2.2	2.3	2.2	1.9
Exceeding 6 per cent. ..	..	..	5.3	2.3	0.2	..	..	..
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Rate of Interest Payable	3.7	3.6	4.4	4.9	3.7	3.5	3.4	3.3

5. **Dates of Maturity.**—Securities like the British Consols are interminable, but Australian debts have in most cases a fixed date for repayment, there being a few exceptions which are included in the following table under the headings " Interminable ", " Treasurer's option ", and " Indefinite ". Those terminable at " Treasurer's option " include amounts which are payable by the respective Governments after giving a specified notice, and those " indefinite " consist of certain amounts owing to the Commonwealth Government. Generally, renewal is effected at date of maturity in respect of the greater portion of the loan. In order to avoid application to the market at an unfavourable time, the practice has been adopted of specifying a period prior to the date of maturity within which the Government, on giving notice, has the option of redeeming the loan. The Government can, therefore, take advantages of opportunities that may offer during the period for favourable renewals. Particulars concerning the due dates of latest maturity of the State loans outstanding on 30th June, 1947 are given in the following table, the various maturities being grouped according to years ended 30th June.

STATE PUBLIC DEBTS AT 30th JUNE, 1947 : LATEST DATES OF MATURITY.

Year of Maturity.	Maturing in—			
	London.	New York.	Australia.	Total.
	£ Stg.	£ Stg.	£ Aust.	£
1947–48	22,867,839	..	21,962,026	44,829,865
1948–49	21,252,995	..	38,796,943	60,049,938
1949–50	6,055,545	..	47,542,842	53,598,387
1950–51	20,454,078	..	21,316,393	41,770,471
1951–52	..	..	26,278,572	26,278,572
1952–53	11,789,758	..	1,103,477	12,893,235
1953–54	16,526,690	..	15,522,244	32,048,934
1954–55	3,204,904	..	42,322,284	45,527,188
1955–56	..	4,793,157	36,590,440	41,383,597
1956–57	..	4,089,387	25,820,633	29,910,020
1957–58	38,011,400	5,112,557	54,551,243	97,675,200
1958–59	21,083,600	..	46,746,172	67,829,772
1959–60	3,779,524	..	50,603,893	54,383,417
1960–61	23,472,719	..	31,589,433	55,062,152
1961–62	4,866,583	5,691,154	47,809,772	58,367,509
1962–63	10,283,396	..	1,668,476	11,951,872
1963–64	..	..	3,603,996	3,603,996
1964–65	..	..	1,563,718	1,563,718
1965–66	..	..	1,084,157	1,084,157
1966–67	24,022,000	5,115,586	2,450,322	31,587,908
1967–68	..	..	2,201,940	2,201,940
1968–69	..	..	2,455,217	2,455,217
1969–70	43,494,876	..	3,241,891	46,736,767
1970–71	11,545,722	..	2,369,070	13,914,792
1971–72	16,074,596	..	2,177,007	18,251,603
1972–73	..	..	1,475,388	1,475,388
1973–74	..	..	1,541,781	1,541,781
1974–75	32,119,721	..	1,611,161	33,730,882
1975–76	..	..	1,733,727	1,733,727
1976–77	..	..	1,759,428	1,759,428
1977–78	..	..	1,838,602	1,838,602
1978–79	..	..	1,921,339	1,921,339
1979–80	..	..	2,007,800	2,007,800
1980–81	..	..	2,098,151	2,098,151
1981–82	..	..	2,192,567	2,192,567
1982–83	..	..	1,661,270	1,661,270
Overdue	1,950	..	105,780	107,730
Interminable	1,000	..	..	1,000
Treasurer's option	2,397,149	..	..	2,397,149
Half-yearly drawings ..	..	..	6,354,827	6,354,827
Indefinite	..	..	10,467,040	10,467,040
Total ..	333,306,045	24,801,841	568,141,022	926,248,908

Particulars of the State Public Debts according to the year of earliest maturity are shown hereunder :—

STATE PUBLIC DEBTS AT 30th JUNE, 1947 : EARLIEST DATES OF MATURITY.

Year of Maturity.	Maturing in—			
	London.	New York.	Australia.	Total.
	£ Stg.	£ Stg.	£ Aust.	£
Before 1947–48	74,794,860	..	..	74,794,860
1947–48	40,738,339	5,112,557	33,339,086	79,189,982
1948–49	5,730,625	..	43,542,603	49,273,228
1949–50	1,920,650	..	36,301,202	38,221,852
1950–51	22,585,823	..	253,971,207	276,557,030
1951–52	..	..	26,278,572	26,278,572
1952–53	..	4,793,157	41,979,627	46,772,784
1953–54	21,083,600	..	23,206,944	44,290,544
1954–55	20,140,900	..	1,446,134	21,587,034
1955–56	16,065,606	..	17,069,098	33,134,704
1956–57	..	4,089,387	21,615,683	25,705,070
1957–58	..	..	1,189,329	1,189,329
1958–59	14,055,000	..	1,344,897	15,399,897
1959–60	..	..	2,203,925	2,203,925
1960–61	..	..	3,672,833	3,672,833
1961–62	24,022,000	5,691,154	1,395,227	31,108,381
1962–63	..	..	1,668,476	1,668,476
1963–64	..	..	3,603,996	3,603,996
1964–65	13,603,529	..	1,563,718	15,167,247
1965–66	41,574,226	..	1,084,157	42,658,383
1966–67	..	5,115,586	2,450,322	7,565,908
1967–68	16,074,596	..	2,201,940	18,276,536
1968–69	..	..	2,455,217	2,455,217
1969–70	18,516,192	..	3,241,891	21,758,083
1970–71	..	..	2,369,070	2,369,070
1971–72	..	..	2,177,007	2,177,007
1972–73	..	..	1,475,388	1,475,388
1973–74	..	..	1,541,781	1,541,781
1974–75	..	..	1,611,161	1,611,161
1975–76	..	..	1,733,727	1,733,727
1976–77	..	..	1,759,428	1,759,428
1977–78	..	..	1,838,602	1,838,602
1978–79	..	..	1,921,339	1,921,339
1979–80	..	..	2,007,800	2,007,800
1980–81	..	..	2,098,151	2,098,151
1981–82	..	..	2,192,567	2,192,567
1982–83	..	..	1,661,270	1,661,270
Overdue	1,950	..	105,780	107,730
Interminable	1,000	..	..	1,000
Treasurer's option	2,397,149	..	..	2,397,149
Half-yearly drawings ..	..	..	6,354,827	6,354,827
Indefinite	..	..	10,467,040	10,467,040
Total	333,306,045	24,801,841	568,141,022	926,248,908

Under the Financial Agreement Act 1944, Treasury Bills issued to meet State revenue deficits accruing between 1st July, 1928 and 30th June, 1935 were retired on 31st December, 1944. In place of those not redeemed, one per cent. debentures amounting to £43,018,000 were issued. One of these debentures will mature in each year up to 1983. Particulars of these debentures are included under their respective years of maturity in the tables above. For further details see par. 4, Section C.—Commonwealth and State Finance.

6. **Sinking Funds.**—Prior to the passing of the Financial Agreement Act 1928, the practice by the States of providing sinking funds had been consistently followed in Western Australia only. This Act contains provisions for the establishment of a sinking fund on States' debts (see p. 688). Some particulars of the transactions of the National Debt Sinking Fund (States' Account) for 1946–47 are shown below, and further details are given in the *Finance Bulletin* issued by this Bureau.

STATE PUBLIC DEBTS AT 30th JUNE, 1947 : SINKING FUNDS.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Total Receipts, 1946–47 ..	3,627,547	1,812,390	1,291,189	1,085,121	976,273	305,313	9,097,833
Total Receipts, to 30th June, 1947..	45,222,505	22,742,806	16,716,681	13,647,457	12,321,372	3,531,430	114,182,251
Investments Realized (*a*) ..	..	..	651,302	..	954,395	..	1,605,697
Grand Total to 30th June, 1947	45,222,505	22,742,806	17,367,983	13,647,457	13,275,767	3,531,430	115,787,948
Total Funds applied to Redemptions, 1946–47 ..	3,420,672	1,448,737	2,471,280	1,172,612	934,985	381,642	9,829,928
Total Funds applied to Redemptions, to 30th June, 1947	43,775,441	21,589,966	17,005,474	13,231,382	12,730,483	3,477,694	111,810,440
Balance at 30th June, 1947 ..	1,447,064	1,152,840	362,509	416,075	545,284	53,736	3,977,508

(*a*) Investments of the States' Sinking Funds at 1st July, 1929, transferred to the National Debt Sinking Fund.

C. COMMONWEALTH AND STATE FINANCE.

1. **Revenue and Expenditure.**—(i) *Consolidated Revenue Funds.* The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the five years 1938–39 and 1943–44 to 1946–47. Figures are shown for the total revenue and expenditure of the Commonwealth and the States, as shown in other sections of this Year Book, and also unadjusted and adjusted figures for the aggregate revenue and expenditure. The adjusted figures are obtained by deducting from the totals, payments made by the Commonwealth to the States on account of tax reimbursements, interest under the Financial Agreement and special grants. An estimate of pay-roll tax paid by the States to the Commonwealth is also deducted.

COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS: REVENUE.

Year ended 30th June—	Commonwealth.	State.	Total.	
			Unadjusted.	Adjusted.
	£'000.	£'000.	£'000.	£m.
1939	95,064	124,894	219,958	210.2
1944	342,188	169,616	511,804	467.2
1945	376,854	169,657	546,511	500.2
1946	390,780	166,508	557,288	509.2
1947	431,256	172,573	603,829	550.1

COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS: EXPENDITURE.

Year ended 30th June—	Commonwealth.	State.	Total.	
			Unadjusted.	Adjusted.
	£'000.	£'000.	£'000.	£m.
1939	94,437	128,770	223,207	213.4
1944	342,188	167,615	509,803	465.2
1945	376,854	167,785	544,639	498.9
1946	390,780	166,218	556,998	510.5
1947	431,256	174,576	605,832	550.0

(ii) *Loan Expenditure.* The aggregate gross and net loan expenditures of the Commonwealth and States on Works and Services for the years 1938–39 and 1943–44 to 1946–47 are shown in the following table :—

COMMONWEALTH AND STATE LOAN EXPENDITURE: WORKS AND SERVICES.(a)

Year ended 30th June—	Gross Loan Expenditure.			Net Loan Expenditure.		
	Commonwealth.	State.	Total.	Commonwealth.	State.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1939	3,913	21,399	25,312	3,594	13,178	16,772
1944	377,157	9,713	386,870	b 377,364	2,965	380,329
1945	266,040	13,014	279,054	265,991	6,139	272,130
1946	159,743	14,280	174,023	159,727	7,019	166,746
1947	48,909	30,337	79,246	48,895	23,809	72,704

(a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes £283,000 adjustment of credits of previous years.

2. **Taxation.**—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938–39 and 1943–44 to 1946–47. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

COMMONWEALTH AND STATE TAXATION : TOTAL COLLECTIONS.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47
	£	£	£	£	£
Commonwealth (*a*)—					
Income Tax	11,882,440	183,799,169	215,534,037	214,593,578	207,764,940
Customs and Excise ..	47,632,365	67,291,416	67,176,671	77,960,644	102,246,389
Sales Tax	9,308,334	27,908,691	29,671,802	33,600,175	36,264,585
Flour Tax	1,808,972	1,940,481	1,995,775	1,779,238	1,747,383
Other.. ..	3,479,184	22,811,815	23,616,474	25,277,571	37,592,502
Total .	74,111,295	303,751,572	337,994,759	353,211,206	385,615,799
State (*b*)—					
Income Tax	29,791,201	*c* 1,446,189	(*c*) 821,637	(*c*) 741,483	(*c*) 530,621
Other.. .. .	20,715,796	19,868,106	21,289,330	24,318,939	27,895,975
Total	50,506,997	*d*21,314,295	*d*22,110,967	*d*25,060,422	*d*28,426,596
Grand Total ..	124,618,292	325,065,867	360,105,726	378,271,628	414,042,395
Taxation per head—					
Commonwealth (*e*)—	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Income Tax	1 14 3	25 5 6	29 6 7	28 17 8	27 12 7
Customs and Excise ..	6 17 5	9 5 1	9 2 10	10 9 10	13 11 11
Sales Tax . ..	1 6 10	3 16 9	4 0 9	4 10 5	4 16 5
Flour Tax	0 5 3	0 5 4	0 5 5	0 4 10	0 4 8
Other . ..	0 10 0	3 2 9	3 4 3	3 8 0	5 0 0
Total . ..	10 13 9	41 15 5	45 19 10	47 10 9	51 5 7
State (*f*)—					
Income Tax ..	4 6 2	0 4 0	0 2 3	0 2 0	0 1 5
Other	2 19 11	2 14 10	2 18 2	3 5 8	3 14 6
Total	7 6 1	2 18 10	3 0 5	3 7 8	3 15 11
Grand Total (*e*) ..	17 19 5	44 14 0	49 0 0	50 18 3	55 1 3

(*a*) For details *see* page 610. (*b*) For details *see* pages 659–63. (*c*) Arrears of State Income Tax. (*d*) Excludes Tax Reimbursements. (*e*) Based on mean population for each financial year. (*f*) Based on aggregate mean population of the six States for each financial year.

3. **Public Debt.**—(i) *Where redeemable.* The following table shows the public debt of the Commonwealth and of the States at 30th June in each of the years 1939 and 1944 to 1947.

COMMONWEALTH AND STATE PUBLIC DEBT AT 30th JUNE.

Particulars.	Where Redeemable.	1939.	1944.	1945.	1946.	1947.
Commonwealth	Australia £A.	218,496,483	1,299,079,078	1,552,196,222	1,723,586,964	1,755,372,215
	London £Stg.	83,116,727	81,504,451	81,254,451	69,954,729	69,704,729
	New York £Stg.	15,913,501	15,790,414	15,790,414	15,790,414	15,797,974
	Total £ (*a*)	317,526,711	1,396,373,943	1,649,241,087	1,809.332,107	1,840,874,918
States ..	Australia £A.	485,179,757	491,839,508	514,277,349	542,644,849	568,141,022
	London £Stg.	384,327,833	373,504,726	361,391,631	337,592,900	333,306,045
	New York £Stg.	28,264,451	25,415,586	25,308,733	25,113,007	24,801,841
	Total £ (*a*)	897,772,041	890,759,820	900,977,713	905,350,756	926,248,908
Total, Commonwealth and States	Australia £A.	703,676,240	1,790,918,586	2,066,473,571	2,266,231,813	2,323,513,237
	London £Stg.	467,444,560	455,009,177	442,646,082	407,547,629	403,010,774
	New York £Stg.	44,177,952	41,206,000	41,099,147	40,903,421	40,599,815
	Grand Total £(*a*)	1,215,298,752	2,287,133,763	2,550,218,800	2,714,682,863	2,767,123,826

(*a*) The "face" or "book" value of the debts without adjustment on account of currency changes since the loans were floated. Debt maturing in New York has been converted from dollars to sterling on the basis of $4.8665 to £ Stg. 1.

(ii) *Interest Payable.* The following table shows the interest payable on the public debt of the Commonwealth and of the States at 30th June in each of the years 1939 and 1944 to 1947 :—

COMMONWEALTH AND STATE PUBLIC DEBT AT 30th JUNE: INTEREST PAYABLE.

Particulars.	Where Payable.	1939.	1944.	1945.	1946.	1947.
Commonwealth ..	Australia £A.	8,344,627	33,944,945	40,046,655	45,395,742	47,345,301
	London £Stg.	3,403,554	3,277,105	3,271,480	2,408,268	2,402,643
	New York £Stg.	777,586	771.780	771,780	771,780	732,118
	Total £ (*a*)	12,525.767	37,993,830	44,089,915	48,575,790	50,480.062
States	Australia £A.	17,240,238	16,622,757	16,742,183	17,646,555	18,436,211
	London £Stg.	14,962,882	14,310,933	13,927,674	11,732,737	11,293,136
	New York £Stg.	1.441,476	1,262,936	1,257,593	1,247,807	999,314
	Total £ (*a*)	33,644,596	32,196,626	31,927,450	30,627,099	30,728,661
Total, Commonwealth and States	Australia £A.	25,584,865	50,567,702	56,788,838	63,042,297	65,781,512
	London £Stg.	18,366,436	17,588,038	17,199,154	14,141,005	13,695,779
	New York £Stg.	2,219,062	2,034.716	2,029,373	2,019,587	1.731,432
	Total £ (*a*)	46,170,363	70,190,456	76,017,365	79,202,889	81,208,723
		£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Average Rate per cent.	Australia £A.	3 12 9	2 16 8	2 15 1	2 15 8	2 16 8
	London £Stg.	3 18 7	3 17 4	3 17 9	3 9 5	3 8 0
	New York £Stg.	5 0 6	4 18 9	4 18 9	4 18 9	4 5 4
	Total £ (*a*)	3 16 0	3 1 7	2 19 9	2 18 4	2 18 9

(*a*) The nominal amount and average rate of interest payable taking no account of exchange, *see* footnote (*a*) above.

(iii) *Public Debt and Interest Payable in Australian Currency.* In the foregoing tables relating to Commonwealth and State Public Debt the debt outstanding in London is expressed in sterling, and debt outstanding in New York is expressed in sterling converted from dollars at the rate of $4.8665 to £stg 1. This method of showing the debt gives no indication of the amount that the Australian Government would have to find to repay the debt. In the following tables the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London and in New York has been converted to Australian currency at the selling rate of exchange on 30th June, 1947

COMMONWEALTH AND STATE PUBLIC DEBT: INTEREST PAYABLE AND AVERAGE RATE AT 30th JUNE, 1947, AUSTRALIAN CURRENCY.

Particulars.	Maturing in—			Total
	London.(*a*)	New York. (*b*)	Australia.	
TOTAL DEBT.				
Commonwealth Debt—	£A.'000.	£A.'000.	£A.'000.	£A.'000.
War (1914–18)	13,360	..	158,742	172,102
War (1939–45)	7,247	..	1,531,532	1,538,779
Works and other purposes	66,872	24,024	65,098	155,994
Total Commonwealth Debt	87,479	24,024	1,755,372	1,866,875
State Debt—				
New South Wales	181,567	17,394	205,914	404,875
Victoria	70,479	6,844	122,437	199,760
Queensland	59,394	7,430	83,144	149,968
South Australia	47,479	2,636	74,569	124,684
Western Australia	48,946	3,065	57,986	109,997
Tasmania	10,434	347	24,091	34,872
Total State Debt	418,299	37,716	568,141	1,024,156
Commonwealth and State Debt—				
Short-term Debt	31,485	..	399,590	431,075
Other Debt	474,293	61,740	1,923,923	2,459,956
Grand Total	505,778	61,740	2,323,513	2,891,031
ANNUAL INTEREST PAYABLE.				
	£A.'000.	£A.'000.	£A.'000.	£A.'000.
Commonwealth Debt—				
War (1914–18)	497	..	5,978	6,475
War (1939–45)	290	..	39,474	39,764
Works and other purposes	2,229	1,113	1,893	5,235
Total Commonwealth Debt	3,016	1,113	47,345	51,474
State Debt—				
New South Wales	6,299	586	6,415	13,300
Victoria	2,352	324	4,153	6,829
Queensland	2,055	308	2,735	5,098
South Australia	1,536	131	2,483	4,150
Western Australia	1,561	154	1,880	3,595
Tasmania	370	17	770	1,157
Total State Debt	14,173	1,520	18,436	34,129
Total Commonwealth and State Debt	17,189	2,633	65,781	85,603
AVERAGE RATE OF INTEREST PAYABLE.				
	£A. *s.* *d.*	£A. *s.* *d.*	£A. *s.* *d.*	£A. *s.* *d.*
Commonwealth Debt—				
War (1914–18)	3 14 5	..	3 15 5	3 15 4
War (1939–45)	4 0 0	..	2 11 7	2 11 9
Works and other purposes	3 6 8	4 12 8	2 18 2	3 7 1
Total Commonwealth Debt	3 8 11	4 12 8	2 14 0	2 15 2
State Debt—				
New South Wales	3 9 5	3 7 4	3 2 4	3 5 8
Victoria	3 6 9	4 14 6	3 7 10	3 8 4
Queensland	3 9 2	4 2 11	3 5 11	3 8 0
South Australia	3 4 8	5 0 0	3 6 7	3 6 7
Western Australia	3 3 10	5 0 0	3 4 10	3 5 4
Tasmania	3 11 0	5 0 0	3 3 10	3 6 4
Total State Debt	3 7 9	4 0 7	3 4 11	3 6 8
Total Commonwealth and State Debt	3 8 0	4 5 4	2 16 8	2 19 3

(*a*) Converted at rate of £ stg. 100 = £A. 125 10s. (*b*) Converted at rate of $3.2002 = £A. 1.

(iv) *Short-term Debt.* (*a*) *Amount.* Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at intervals from 30th June, 1938 to 30th June, 1947 are given in the following table. This debt is included in the public debt as shown on earlier pages.

COMMONWEALTH AND STATES: SHORT-TERM DEBT.(*a*)

Date.	Maturing in London.			Maturing in Australia.		
	Commonwealth.	States.	Total.	Commonwealth.	States.	Total
	£'000. Stg.	£'000. Stg.	£'000. Stg.	£'000. Aust.	£'000. Aust.	£'000. Aust.
30th June, 1938 ..	5,495	23,155	28,650	..	46,598	46,598
,, ,, 1939 ..	4,220	23,155	27,375	..	50,228	50,228
,, ,, 1940 ..	3,970	23,155	27,125	..	45,463	45,463
,, ,, 1941 ..	3,720	23,155	26,875	1,750	45,423	47,173
,, ,, 1942 ..	3,470	24,879	28,349	80,481	45,083	125,564
,, ,, 1943 ..	3,220	23,730	26,950	259,250	39,200	298,450
,, ,, 1944 ..	2,970	22,868	25,838	343,280	33,075	376,355
,, ,, 1945 ..	2,720	22,868	25,588	343,280	(*b*) 330	343,610
,, ,, 1946 ..	2,470	22,868	25,338	343,280	..	343,280
30th September, 1946	2,470	22,868	25,338	316,560	..	316,560
31st December, 1946	2,220	22,868	25,088	288,280	..	288,280
31st March, 1947 ..	2,220	22,868	25,088	278,280	..	278,280
30th June, 1947 ..	2,220	22,868	25,088	278,280	..	278.280

(*a*) Excludes Overdrafts and Internal Treasury Bills. (*b*) Treasury Bills issued to finance State deficits between 1st July, 1928 and 30th June, 1935 were retired on 31st December, 1944, and debentures having a currency of from 1 to 39 years were issued in their place (*see* pages 678 and 689).

(*b*) *Interest Rates.—London.* The rates of interest payable on Treasury Bills and Debentures in London during the following periods were: 1938–39 to 1940–41—minimum rate, 2 per cent., maximum rate, 2¼ per cent.; 1941–42 to 1943–44—minimum rate, 2 per cent., maximum rate, 3 per cent.; 1944–45 to 1946–47—minimum rate, 2 per cent., maximum rate, 2¼ per cent.

Australia. The Treasury Bill rates in Australia were as follows:—

5½ per cent. from 10th October, 1929.
6 per cent. from 1st October, 1930.
4 per cent. from 31st July, 1931.
3½ per cent. from 27th October, 1932.
3¼ per cent. from 21st January, 1933.
2¾ per cent. from 18th February, 1933.
2½ per cent. from 1st June, 1933.
2¼ per cent. from 1st April, 1934.
2 per cent. from 15th October, 1934.
1¾ per cent. from 1st January, 1935
1½ per cent. from 1st May, 1940.
1¼ per cent. from 1st May, 1943.
1 per cent. from 1st March, 1945.

(v) *Debts of States and Municipal and Semi-governmental Bodies.* For the reasons indicated on page 673 direct comparisons of the debts of the several States should be made with caution. The table following shows for 1938–39 to 1940–41 and 1946–47 particulars of the debts of the States and the debts due to the Public Creditor by municipal and semi-governmental bodies in each State. This affords a more reliable comparison, but as complete records are not available over a long period, particulars showing comparisons of the growth of the debt cannot be made.

PUBLIC DEBT : STATES, MUNICIPAL AND SEMI-GOVERNMENTAL BODIES.

State.		Debts of the States. (a)	Due to Public Creditor.		Grand Total.
			Municipal.	Semi-Governmental Bodies.	
		1946–47.			
		£'000.	£'000.	£'000.	£'000.
New South Wales		362,028	24,188	74,913	461,129
Victoria		183,096	10,313	59,368	252,777
Queensland		135,356	22,297	5,674	163,327
South Australia		114,134	579	11,145	125,858
Western Australia		99,002	1,691	263	100,956
Tasmania		32,633	2,625	480	35,738
Total. All States	1946–47	926,249	61,693	151,843	1,139,785
	1940–41	916,022	80,255	132,046	1,128,323
	1939–40	905,727	80,316	128,652	1,114,605
	1938–39	897,772	78,126	120,512	1,096,410

Debt Per Head of Population.

1946–47.

State.		Debts of the States. (a)	Municipal.	Semi-Governmental Bodies.	Grand Total.
		£	£	£	£
New South Wales		121.3	8.1	25.1	154.5
Victoria		89.1	5.0	28.9	123.0
Queensland		122.4	20.1	5.1	147.6
South Australia		176.6	0.9	17.3	194.8
Western Australia		196.9	3.4	0.5	200.8
Tasmania		126.9	10.2	1.9	139.0
Total, All States	1946–47	122.6	8.2	20.1	150.9
	1940–41	129.3	11.3	18.7	159.3
	1939–40	129.1	11.4	18.3	158.8
	1938–39	129.2	11.2	17.4	157.8

(a) Includes amounts due by municipal and semi-governmental bodies.

Details of the debt of local and semi-governmental authorities were not compiled for the years 1941–42 to 1945–46.

4. **The Financial Agreement between the Commonwealth and the States.**—(i) *Details of the Agreement.* The original Financial Agreement between the Commonwealth and the States was made on 12th December, 1927. It was later affected by the following agreements made under the powers conferred by Section 105A of the Constitution :—

Debt Conversion Agreement—Made 21st July, 1931.
Debt Conversion Agreement (No. 2)—Made 22nd October, 1931.
Agreement relating to Soldier Settlement Loans—Made 3rd July, 1934.
Financial Agreement 1944—Made 15th November, 1944.

The Debt Conversion Agreements did not affect the wording of the main agreement, but contained provisions stating that where their provisions were not in accordance with any contained in the Financial Agreement the former should prevail. An Agreement was made between the Commonwealth and Tasmania only on 1st July, 1928. This was not an amendment, but was made under the authority of Part III., Clause 3 (*l*) of the original Agreement.

A summary of the original Agreement as affected by the subsequent Agreements is given below.

(i) *Australian Loan Council.* Under the Agreement, an Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States It consists of the Prime Minister of the Commonwealth as Chairman and the Premier of each State, or in their absences Ministers nominated by them in writing.

Each of the Governments submits annually to the Loan Council a programme setting forth the amount it desires to raise by loans during each financial year for purposes other than the conversion, renewal or redemption of existing loans, or for temporary purposes. Any revenue deficit to be funded must be included in the loan programme Loans for defence purposes are not subject to the Agreement, and therefore the Commonwealth is not required to include borrowing for that purpose in its programme for submission to the Loan Council.

If the Loan Council decides that the total amount of the loan programmes for the year cannot be borrowed at reasonable rates and conditions, it then decides the amount which shall be borrowed and may, by unanimous decision, allocate that amount between the Commonwealth and the States. In default of a unanimous decision, the Commonwealth is then entitled to one-fifth of the total amount to be borrowed and each State to a proportion of the remainder equal to the ratio of its net loan expenditure in the preceding five years to the net loan expenditure of all States during the same period.

In questions decided by a majority vote of the Council members, the member representing the Commonwealth has two votes and a casting vote and each member representing a State has one vote.

(ii) *Borrowings of the Commonwealth and the States.* (*a*) Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

(*b*) If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bondholders in respect of the money so borrowed and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

(*c*) Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may—

(i) Borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice ;
(ii) Borrow from the public by means of counter sales of securities ; and
(iii) Use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

(*d*) Where such borrowings are not solely for temporary purposes, they are treated as loans under the Agreement and, if the amount together with the amount of loan money raised for the Government concerned by the Loan Council exceeds the limit (if any) of the amount to be raised for or by that Government, the excess is deemed to be money received by the Government in the following year on account of its loan programme for that year.

(*e*) The Commonwealth or any State may use for temporary purposes any public moneys available under the laws of the Commonwealth or a State and may, subject to terms approved by the Loan Council, borrow money for temporary purposes by way of overdraft, or fixed, special or other deposit. The conditions as to sinking fund, etc., do not apply to such temporary borrowing.

(iii) *Taking over of State Public Debts.* Subject to the provision of the Financial Agreement, the Commonwealth took over on 1st July, 1929—

(*a*) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and

(*b*) all other debts of each State existing on 1st July, 1929, for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State—

and in respect of these debts assumed, as between the Commonwealth and the States, the liabilities of the States to bond holders.

The net public debt of each State existing on 30th June, 1927, was as follows :—

	£
New South Wales	234,088,501
Victoria	136,949,942
Queensland	101,977,855
South Australia	84,834,364
Western Australia	61,060,675
Tasmania	22,434,060
Total	641,345,397

These amounts have been varied in accordance with the terms of the "Agreement relating to Soldiers Settlement Loans" made on 3rd July, 1934. The amended figures are—

	£
New South Wales	233,153,779
Victoria	136,348,982
Queensland	101,840,622
South Australia	84,029,376
Western Australia	61,060,675
Tasmania	22,314,180
Total	638,747,614

These amounts represent the gross debt less—

(*a*) the values of properties transferred by the States to the Commonwealth as shown below;

(*b*) the balances of the State sinking funds at 30th June, 1927.

(iv) *Transferred Properties.* In respect of State properties transferred to the Commonwealth under Section 85 of the Constitution, the States, as from 1st July, 1929, are discharged from any liability in respect of principal, interest or sinking fund on so much of the debts bearing interest at 5 per cent. per annum, taken over by the Commonwealth, as amounts to the agreed value of these properties, namely £10,924,323, apportioned to the several States as follows :—

	£
New South Wales	4,788,005
Victoria	2,302,862
Queensland	1,560,639
South Australia	1,035,631
Western Australia	736,432
Tasmania	500,754
Total	10,924,323

(v) *Payment of Interest.* The Commonwealth will, in each year during a period of 58 years from 1st July, 1927, contribute the sum of £7,584,912 towards the interest payable on the State debts, the States paying the balance to the Commonwealth. After that period, the States will pay to the Commonwealth the whole of the interest due.

The distribution among the States of the contribution of the Commonwealth is as follows :—

	£
New South Wales	2,917,411
Victoria	2,127,159
Queensland	1,096,235
South Australia	703,816
Western Australia	473,432
Tasmania	266,859
Total	7,584,912

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926–27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910, as compensation for the States relinquishing, after Federation, the right to levy customs and excise duties.

(vi) *Sinking Funds.* (*a*) A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per cent. on the net public debts of the States existing at 30th June, 1927 and each State contributes annually 5s. per cent. on the net public debt of such State at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.

(*b*) On new borrowings after 1st July, 1927 (except those for redemptions or conversions, or funding a State deficit) a sinking fund at the rate of 10s. per cent. per annum was established and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927–28 until 1st July, 1928.)

(*c*) Any State may increase its contribution in respect of loan funds expended on wasting assets in order to redeem a loan within a shorter period than 53 years. When this shorter period has expired, the State contributions cease but the Commonwealth contributions continue until the full period of 53 years has elapsed. State contributions in respect of other loans are reduced by the amount of these Commonwealth contributions during the period remaining.

(*d*) Where loan moneys have been advanced by a State under terms providing for their repayment, the State may credit such repayments either to the loan account or to the sinking fund and, in addition, it must provide from revenue its sinking fund contributions in respect of the loan from which the money so advanced was provided. However, advances repaid to the State from the revenue of Public or Local Authorities may be used by the State to meet sinking fund contributions in respect of the loans concerned.

(*e*) In respect of any loan (except any of the loans referred to in par. (*f*) below) raised after 30th June, 1927 by a State to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of 4½ per cent. per annum compound interest.

(*f*) In respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit accruing after 30th June, 1927 and before 1st July, 1935, the Commonwealth and the State shall in each year during the period commencing on 1st July succeeding the date of raising the loan and ending on 30th June, 1944, pay from revenue a sinking fund contribution at the rate of 5s. for each £100 of the total amount of the Commonwealth Treasury Bills which have been issued in respect of these loans and which are current on 30th June preceding the commencement of the year in which the sinking fund contribution is payable.

The National Debt Commission shall apply the following amounts to the repurchase or redemption of the Commonwealth Treasury Bills issued as above :—

	£
New South Wales	1,970,000
Victoria	260,000
Queensland	125,000
South Australia	300,000
Western Australia	335,000
Tasmania	10,000
Total	3,000,000

The provisions requiring the States to make a further sinking fund contribution of 4½ per cent. per annum on cancelled securities do not apply to the securities redeemed as above.

In each year during a period of 39 years commencing on 1st July, 1944, the Commonwealth and the State concerned shall each pay from revenue a sinking fund contribution of 5s. per cent. and 15s. per cent. respectively in respect of the following amounts which represent the gross total of the deficit loans mentioned above less the amount to be redeemed by the National Debt Commission (£3,000,000) and the amounts which the States have undertaken to apply to the redemption of these loans, viz. :—

	£
New South Wales	26,120,000
Victoria	3,995,000
Queensland	2,148,000
South Australia	4,920,000
Western Australia	5,390,000
Tasmania	445,000
Total	43,018,000

(*g*) The sinking funds established are controlled by the National Debt Commission which may arrange with any State to act as its agent in connexion with payments due to bondholders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature, held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.

(*h*) Sinking fund contributions made in respect of the debts of a State, and funds of that State transferred to the National Debt Commission, are not accumulated but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of 4½ per cent. on the face value of the cancelled security.

(*i*) A State may pay to the National Debt Commission a sum in addition to sinking fund contributions for the repurchase or redemption of securities issued in respect of the public debt of the State. Upon the cancellation of such securities the State shall not be required to make any further sinking fund contribution as provided for in paragraph (*h*) above. The National Debt Commission may also accept an amount from a State for the repurchase or redemption of particular securities with the condition that the sinking fund contributions in respect of that amount by both the State and Commonwealth shall cease as from the date of cancellation of those securities.

(*j*) Where, upon the conversion or partial conversion at a discount of any loan, sinking fund moneys are applied to the redemption of any amount of the converted loan the State shall repay to the National Debt Commission from revenue so much of the sinking fund moneys so applied as does not exceed the aggregate amount of the discounts allowed to subscribers to the loan.

(*k*) Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

(ii) *Enforcement of the Agreement.* Consequent on the failure of the State of New South Wales to provide certain interest payments on its public debts in accordance with the Financial Agreement, the Commonwealth Parliament passed a Financial Agreement Enforcement Act (No. 3 of 1932). The State of New South Wales contended that the Commonwealth could not simply by Commonwealth Act deprive a State of revenue without the interposition of some judicial tribunal. The High Court by a majority decision of four to two held that this was a valid law and dismissed the action, subsequently refusing leave to appeal to the Privy Council.

(iii) *Borrowing by Semi-Governmental Bodies.* It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowings of large amounts by semi-governmental bodies. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules is regarded as the " Gentlemen's Agreement ", and provides, *inter alia*, for the submission of annual loan programmes in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the Government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

D.—TAXES ON INCOME.

1. **General.**—A description of the development of income taxes in Australia appeared in Official Year Book, No. 35, p. 926. Since July, 1943, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income.

2. **Present Taxes.**—At the present time two taxes on incomes of individuals are imposed by the Commonwealth—Income Tax and Social Services Contribution. Both taxes are based on the same definition of assessable income and both are assessed and collected concurrently. Several taxes are imposed on the income of companies for which assessable income is defined in the same way as for individuals.

3. **Assessable Income.**—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on all income derived from Australia while a resident is, in general, not taxed on income other than dividends derived from overseas (provided the income is taxed in the country in which it is derived).

Certain types of Australian income are exempt from tax in Australia, the most important being income from gold-mining and a small amount of tax-free interest on Commonwealth Government securities. No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

Assessable income is divided into two main groups—personal exertion and property. Personal exertion income includes all wage, salary, business and professional incomes, while property income includes all rents, dividends and interest. Property income is taxed for individual income tax at higher rates than personal exertion income in all cases where the total taxable income exceeds £250. No distinction in rates is made for companies.

Expenses incurred in earning income, certain subscriptions to business associations, and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones have been prescribed and the allowances are Zone A, £120 (£40 in 1946–47) and Zone B, £20.

Income Tax and Social Services Contribution are levied on the taxable income (known as " contributable income " for Social Services Contribution) remaining after making these deductions.

4. **Taxes on Individuals.**—Two income taxes, Social Services Contribution, which was introduced from 1st January, 1946, and Income Tax, are levied on individuals. Social Services Contribution is payable by all persons without dependants whose contributable income exceeds £104 per annum. Persons with dependants are exempt from Social Services Contribution if their annual income does not exceed the minimum as set out in paragraph 10 following. For the income year 1947–48, Income Tax is payable by all persons whose income exceeds £250. Rebates of income tax are allowed to taxpayers on account of dependants, and certain medical expenses, taxes and life insurance premiums, etc. paid.

5. **Rebates of Tax.**—No deductions from taxable income are made for dependants but rebates of tax are allowed against income tax assessed. The rebates of tax for dependants are calculated by multiplying the amount specified in the following table for each dependant by the personal exertion rate of tax applicable to the income plus eighteen pence. The rebate for any dependant cannot exceed the maximum rebate shown in the following table.

DEPENDANTS : CONCESSIONAL ALLOWANCES AND MAXIMUM REBATES.(*a*)

Dependant (Resident).	Income Year 1946–47.		Income Year 1947–48.	
	Rebate of Tax on—	Maximum Rebate.	Rebate of Tax on(*b*)—	Maximum Rebate.
	£	£	£	£
Spouse or female relative (*c*) having care of taxpayer's children under 16 years of age	(*d*) 100	45	150	45
Daughter-housekeeper (*c*)	100	45	150	45
Housekeeper (*c*) having care of taxpayer's children under 16 years of age.. ..	100	45	150	45
Parent	(*e*) 100	(*e*) 45	150	45
First child under 16 years of age	75	45	100	45
Other children under 16 years of age ..	30	8	50	15
Invalid child, brother or sister over 16 years of age	(*f*) 75	(*f*) 45	100	45
Child 16 to 19 years receiving full-time education	(*g*) 75	(*g*) 45	100	45

(*a*) If the dependant is not wholly maintained by the taxpayer or was maintained for part only of the year a partial rebate is allowed. (*b*) If the taxpayer is entitled to a rebate for a dependant, an additional rebate of tax on £50 reduced by £1 for every £2 by which the income exceeds £250 is allowed. (*c*) Of a widower or widow. (*d*) If income is between £200 and £250 the concessional allowance is half the income. If between £250 and £300 the concessional allowance is £100 plus half the difference between the income and £300. (*e*) Mother only. (*f*) Invalid child only. (*g*) Child 16 to 18 years.

Rebates at the same rate are allowed on the actual expenditure of the taxpayer on life assurance, superannuation and friendly society contributions (amount limited to £100); medical, hospital, pharmaceutical, optical and dental expenses; remuneration of an attendant on a blind or invalid person; expenditure on artificial limbs, artificial eyes or hearing aids; funeral expenses (amount limited to £20); rates and land taxes on non-income producing property (including an owner-occupied house); and gifts to charitable, benevolent or patriotic funds. The amount allowed for dental expenses is limited to £10 for the taxpayer or any one of his dependants and for the whole group medical, hospital, dental, etc., expenses to £50 for the taxpayer or any one of his dependants.

No rebates are allowed against Social Services Contribution, but a concessional rate of contribution is provided where the contributable income does not exceed the sum of the concessional allowances by more than £180 in 1946–47 or £250 in 1947–48.

A rebate of tax is also allowed on the amounts paid as calls to gold-mining, forestry, and oil prospecting companies at one-third of the normal rebate rate.

Interest on Commonwealth Loans issued prior to 1st January, 1940 is subject to the condition that it shall not be taxed at rates higher than those for 1930–31 and, since present rates are higher in all cases, tax at those rates only is imposed. Interest on Commonwealth Loans issued after 1st January, 1940 and interest on certain State semi-governmental loans issued free of State income tax receive a rebate of 2s. in the £1.

6. **Members of Forces.**—The following concessions in tax were given to members of the Forces :—

(*a*) Deferred pay in respect of services up till 30th June, 1947, was exempt from tax, either as credited or when actually earned ;

(*b*) Dependants' allowances (but not the member's allotment to dependants) were exempt from tax until 30th June, 1947. At the same time the member received the concessional rebate for dependants ;

(*c*) Active pay of members who served outside Australia was exempt from tax until 30th June, 1947. Until 13th February, 1946, these members also received retrospective exemption of income previously received in the year of departure and of income received during the whole of the previous year ; exemption was also granted of income received during the three months following their return to Australia. After 13th February, 1946, these exemptions (for income earned in Australia) could only be claimed by members who were outside Australia or who had departed or volunteered to depart with the Interim Forces on that date. As from the same date service in sea-going ships in Australian waters and in air squadrons operating from Australia no longer qualified as service outside Australia ;

(*d*) Members serving within Australia were exempt from tax if their income did not exceed £250. If their income exceeded £250 the members received a special deduction of £146 which diminished as the income increased and vanished at £587. These exemptions and deductions ceased after 30th June, 1947.

The income of a member of the Forces serving in Australia was the sum of his active pay and £44 per annum (the assumed value of food, clothing and quarters supplied).

Merchant seamen received the special deduction allowed to members of the Forces serving in Australia.

7. **Lodgment of Returns and Assessment of Tax.**—All persons with incomes in excess of £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Tax and contribution payable are assessed and assessment notices showing the amount payable are issued during the year following the year of income (in most cases from October to June following the lodgment of the return). The approximate amount payable, however, has already been collected during the income year—from employees by deductions from wages and from non-employees by provisional tax and contribution. The amount shown on the assessment notice is therefore adjusted against the amount already collected and any difference either collected or refunded.

8. **Deductions from Wages and Salaries.**—Employers are required to deduct tax and contribution from each payment of wages and salary to an employee at the appropriate rate in accordance with a deduction scale. This scale shows the amount to be deducted according to the number of dependants the employee has, and makes an average allowance for other concessional rebates.

Under the group scheme of deduction, which covers most employers of over ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. The employee then uses the group certificate for that year to meet, in full or in part, the assessment on that year's income when it is received.

Under the stamp scheme, used by small employers, a stamp deduction card in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and sticks one part on each half of the card. At the end of the year the employer gives the employee one half of the card and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

9. **Provisional Tax.**—For non-employees collection of tax and contribution for the current year is made at the same time as collection and assessment for the previous year is adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will prove to be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged) but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year.

Employees with more than £50 income from sources other than wages and salaries are also required to pay provisional tax in respect of that income.

10. **Effective Exemptions from Tax.**—In 1947–48 taxpayers without dependants are exempt from Social Services Contribution if their income does not exceed £104 and are exempt from Income Tax if their income does not exceed £250. The effect of rebates for dependants is to exempt taxpayers up to the incomes shown below in the years 1946–47 and 1947–48 :—

Taxpayer with—	Social Services Contribution.		Income Tax	
	1946–47. Income.	1947–48. Income.	1946–47. Income.	1947–48. Income.
	£	£	£	£
No dependants	104	104	200	250
Wife	156	200	280	396
„ and one child	175	283	345	513
„ „ two children	211	317	378	572
„ „ three children	257	350	412	630
„ „ four children	277	400	447	689

11. **Rates of Tax on Individuals.**—The following table shows the rates of income tax in respect of 1946–47 and 1947–48 incomes.

(T = *Taxable Income in Pounds.*)

Rates.	Personal Exertion.		Property.	
	Taxable Income.	Tax in Pence.	Taxable Income.	Tax in Pence
1946–47 Income—	£201– £300	$.06T^2 + 12T - 4,800$	£201– £300	$.1T^2 + 7T - 5,400$
	£301–£1,000	$.02T^2 + 36T - 8,400$	£301–£1,000	$.02T^2 + 55T - 12,600$
	£1,001–£2,000	$.025T^2 + 26T - 3,40$	£1,001–£2,000	$.029T^2 + 37T - 3,600$
	£2,001–£3,000	$.014T^2 + 70T - 47,400$	£2,001–£5,000	$.0035T^2 + 139T - 105,600$
	£3,001–£5,000	$.005T^2 + 124T - 128,400$		
	Over £5,000	$174T - 253,400$	Over £5,000	$174T - 193,100$
1947–48 Income—	£251–£1,000	$.032T^2 + 9T - 4,250$	£251– £500	$.052T^2 + 9T - 5,500$
			£501–£1,000	$.032T^2 + 29T - 10,500$
	£1,001–£2,500	$.018T^2 + 37T - 18,250$	£1,001–£2,500	$.018T^2 + 57T - 24,500$
	£2,501–£5,000	$.007T^2 + 92T - 87,000$	£2,501–£5,000	$.003T^2 + 132T - 118,250$
	Over £5,000	$162T - 262,000$	Over £5,000	$162T - 193,250$

In 1946–47 the basic rate of Social Services Contribution was 3d. in the £1 plus one-eighth of a penny for every £1 by which the contributable income exceeded £100. The maximum basic rate was 1s. 6d. in the £1 which was reached at an income of £220 and applied to all incomes over that amount. If the contributable income did not exceed the sum of the concessional allowances by more than £180 a concessional rate was provided. The concessional rate was the basic rate multiplied by the ratio of the excess of the contributable income over the sum of the concessional allowances to the lesser of the contributable income or £180.

Commencing with the income year 1947–48 the basic rate of Social Services Contribution was altered to 3d. in the £1 plus one-tenth of a penny for every £1 by which the contributable income exceeds £100. The maximum basic rate remains at 1s. 6d. in the £1 but is reached at an income of £250. If the contributable income does not exceed the sum of the concessional allowances by more than £250 a concessional rate is applied. The concessional rate is the basic rate multiplied by the ratio of the excess of the contributable income over the sum of the concessional allowances to the lesser of the contributable income or £250.

No Social Services Contribution is payable if the contributable income is less than £105, and if the contributable income is less than £113 the contribution payable shall not exceed half the excess of the contributable income over £104.

The rate of tax for farmers and pastoralists is determined by the average taxable income of the five years up to the current year, but the rate is applied to the taxable income of the current year.

The minimum amount payable is 10s. and the amount payable and rebates are calculated to the nearest shilling.

12. **Taxes on Sample Individual Incomes.**—The following tables show the Income Tax and Social Services Contribution payable by taxpayers with varying incomes and numbers of dependants on income derived in 1946–47 and in 1947–48 :—

COMMONWEALTH TAXES ON INCOME.

Income.	1946–47 Income Year.			1947–48 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.						
£	£	£	£	£	£	£
100 ..	..	..	..	..	..	..
150 ..	..	5.80	5.80	..	5.00	5.00
200 ..	..	12.90	12.90	..	10.85	10.85
250 ..	8.10	18.75	26.85	..	18.75	18.75
300 ..	17.50	22.50	40.00	5.55	22.50	28.05
350 ..	27.70	26.25	53.95	11.75	26.25	38.00
400 ..	38.35	30.00	68.35	18.60	30.00	48.60
500 ..	60.85	37.50	98.35	34.35	37.50	71.85
600 ..	85.00	45.00	130.00	52.80	45.00	97.80
800 ..	138.35	60.00	198.35	97.60	60.00	157.60
1,000 ..	198.35	75.00	273.35	153.10	75.00	228.10
1,500 ..	382.70	112.50	495.20	323.95	112.50	436.45
2,000 ..	619.15	150.00	769.15	532.30	150.00	682.30
3,000 ..	1,202.50	225.00	1,427.50	1,050.00	225.00	1,275.00
5,000 ..	2,569.15	375.00	2,944.15	2,283.35	375.00	2,658.35
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.						
£	£	£	£	£	£	£
100 ..	..	..	..	..	..	..
150 ..	..	..	..	..	..	
200 ..	..	7.15	7.15	..	..	..
250 ..	..	13.00	13.00	..	3.75	3.75
300 ..	4.15	22.50	26.65	..	11.25	11.25
350 ..	12.30	26.25	38.55	..	21.00	21.00
400 ..	21.25	30.00	51.25	0.35	30.00	30.35
500 ..	41.20	37.50	78.70	12.80	37.50	50.30
600 ..	63.35	45.00	108.35	28.35	45.00	73.35
800 ..	113.55	60.00	173.55	68.05	60.00	128.05
1,000 ..	171.00	75.00	246.00	118.90	75.00	193.90
1,500 ..	349.70	112.50	462.20	280.30	112.50	392.80
2,000 ..	580.70	150.00	730.70	487.30	150.00	637.30
3,000 ..	1,157.50	225.00	1,382.50	1,005.00	225.00	1,230.00
5,000 ..	2,524.15	375.00	2,899.15	2,238.35	375.00	2,613.35

COMMONWEALTH TAXES ON INCOME—*continued*.

Income.	1946–47 Income Year.			1947–48 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total.
Income from Personal Exertion.—Taxpayer with Dependent Wife and One Child.						
£	£	£	£	£	£	£
100	..	..	..	..	..	..
150	..	..	..	..	..	..
200	..	1.80	1.80	..	..	..
250	..	5.20	5.20	..	..	..
300	..	15.60	15.60	..	2.25	2.25
350	0.70	25.50	26.20	..	10.50	10.50
400	8.45	30.00	38.45	..	18.00	18.00
500	26.45	37.50	63.95	..	37.50	37.50
600	47.10	45.00	92.10	12.05	45.00	57.05
800	94.95	60.00	154.95	48.35	60.00	108.35
1,000	150.50	75.00	225.50	96.05	75.00	171.05
1,500	324.95	112.50	437.45	251.20	112.50	363.70
2,000	551.85	150.00	701.85	453.20	150.00	603.20
3,000	1,121.80	225.00	1,346.80	962.50	225.00	1,187.50
5,000	2,480.00	375.00	2,855.00	2,193.35	375.00	2,568.35
Income from Personal Exertion.—Taxpayer with Dependent Wife and Two Children.						
£	£	£	£	£	£	£
100				..	..	..
150				..	..	
200		..	..		..	
250	..	2.10	2.10	..	..	..
300	..	11.85	11.85	..	..	..
350	..	21.15	21.15	..	5.25	5.25
400	3.35	30.00	33.35	..	12.00	12.00
500	20.55	37.50	58.05	..	30.00	30.00
600	40.60	45.00	85.60	3.90	45.00	48.90
800	87.55	60.00	147.55	38.50	60.00	98.50
1,000	142.50	75.00	217.50	84.65	75.00	159.65
1,500	316.95	112.50	429.45	236.65	112.50	349.15
2,000	543.85	150.00	693.85	438.20	150.00	588.20
3,000	1,113.80	225.00	1,338.80	947.50	225.00	1,172.50
5,000	2,472.00	375.00	2,847.00	2,178.35	375.00	2,553.35
Income from Property.—Taxpayer with No Dependants.						
£	£	£	£	£	£	£
100				..	..	
150		5.80	5.80		5.00	5.00
200		12.90	12.90		10.85	10.85
250	10.85	18.75	29.60		18.75	18.75
300	23.75	22.50	46.25	7.85	22.50	30.35
350	37.90	26.25	64.15	16.75	26.25	43.00
400	52.50	30.00	82.50	26.75	30.00	56.75
500	82.90	37.50	120.40	50.00	37.50	87.50
600	115.00	45.00	160.00	76.75	45.00	121.75
800	184.15	60.00	244.15	138.25	60.00	198.25
1,000	260.00	75.00	335.00	210.40	75.00	285.40
1,500	488.10	112.50	600.60	422.90	112.50	535.40
2,000	776.65	150.00	926.65	672.90	150.00	822.90
3,000	1,428.75	225.00	1,653.75	1,269.80	225.00	1,494.80
5,000	2,820.40	375.00	3,195.40	2,569.80	375.00	2,944.80

13. **Company Income Taxes.**—(i) *General.* For taxation purposes, companies are divided into two main groups—public companies and private companies. A private company is defined as a company which is under the control of not more than seven persons, and which is not a company in which the public are substantially interested or a subsidiary of a public company. Ordinary income tax is imposed on both groups of companies, but other taxes on companies are imposed according as to whether a company is public or private. Pay-as-you-earn taxation and Social Services Contribution have not been applied to companies.

(ii) *Public Companies.* (*a*) *Ordinary Income Tax.* The income of companies is assessed for Commonwealth Income Tax on the same principles as for individuals. Tax is, however, assessed at a flat rate on the whole taxable income. Dividends received are assessable income both for companies and individuals, but companies receive a rebate at the company rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies. The rate of ordinary income tax is 6s. in the £1. For mutual life assurance companies this rate is reduced to 5s. in the £1. The rate on Commonwealth Loan Interest subject to 1930–31 rates is 1s. 4d. in the £1.

(*b*) *War-time (Company) Tax.* The War-time (Company) Tax, first imposed in 1940–41 on income derived in 1939–40, was discontinued after 1946–47. The tax was levied on the taxable profit of a company in relation to capital employed. Taxable profit was obtained by deducting from taxable income :—

(*a*) Commonwealth ordinary income tax payable in respect of that taxable income ; and

(*b*) any dividend included in taxable income.

Capital employed excluded shareholdings in other companies.

The tax was imposed on the excess of the taxable profit over 5 per cent. of capital employed. The rates of tax varied from 6 per cent. of the excess to 78 per cent. of the excess (where the excess was over 12 per cent. of capital employed).

Private companies, co-operative companies, mutual life assurance companies, companies in which little or no capital was required and whose profits were derived from commissions, etc., and companies other than subsidiaries whose taxable profits did not exceed £1,000 were exempt from the tax.

(*c*) *Super Tax.* In conjunction with the War-time (Company) Tax, a Super Tax of 1s. in the £1 on the excess of the taxable income over £5,000 was imposed. All companies receive a rebate of 1s. in the £1 on the amount of dividends (from companies which have already paid super tax) included in super tax income.

Commonwealth Loan Interest subject only to 1930–31 rates of tax is excluded from super tax income since the full 1930–31 rate of 1s. 4d. in the £1 is already paid as ordinary income tax. The interest was, however, included in taxable profit for the purposes of War-time (Company) Tax where it had the effect of reducing the War-time (Company) Tax payable because of the low yield on capital.

If a company was liable to both Super Tax and War-time (Company) Tax, the taxes were alternative and, in effect, only the higher of the two and not both taxes were payable. This was achieved by allowing a rebate against War-time (Company) Tax of the lesser of the following amounts :—

(*a*) the amount of War-time (Company) Tax assessed, or

(*b*) the net amount of Super Tax payable.

(*d*) *Undistributed Income Tax.* Since 1940–41 a tax has been imposed at the rate of 2s. in the £1 on the undistributed income of a public company. The undistributed income is the taxable income less :—

(*a*) Commonwealth Income Tax, Super Tax and War-time (Company) Tax and tax paid outside Australia on the taxable income ;

(*b*) dividends paid out of the taxable income before the expiration of six months (nine months if the company is a non-resident) after the close of the year of income ;

(*c*) the net loss incurred in carrying on the company's business outside Australia ; and

(*d*) the portion of Commonwealth Loan Interest subject to 1930–31 rates remaining in the undistributed income.

Mutual life assurance companies and non-resident companies not carrying on business in Australia are exempt from the tax.

(iii) *Private Companies.* Private companies are not liable for War-time (Company) Tax, Super Tax or the normal Undistributed Income Tax. An additional tax on the undistributed income is imposed, this tax being based on the close relationship between a private company and a partnership.

The undistributed income is calculated in approximately the same way as for a public company, but, instead of a flat rate of 2s. in the £1 being imposed, the additional Income Tax and Social Services Contribution which would have been payable by the shareholders, if all the income had been distributed, is calculated, and this amount is charged to the company as additional tax on undistributed income. The tax so charged is allowed with other taxes as a deduction in determining the undistributed income for the following year. In this way the shareholders of a private company are required to pay approximately the same tax as if they were a partnership or sole traders.

14. **Yield of Income Taxes.**—(i) *Collections from all Income Taxes.* The following table shows the collections of taxes of all types imposed on income for the years 1938–39 and 1942–43 to 1946–47 :—

INCOME TAX COLLECTIONS.

Year.	Individuals.			Companies.			Total.		
	Commonwealth.	State.	Total.	Commonwealth.	State.	Total.	Commonwealth.	State.	Total.
	£'000.	£'000.	£.000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	7,582	18,314	25,896	4,300	11,498	15,798	11,882	29,812	41,694
1942–43(*a*) ..	93,481	4,792	98,273	48,408	1,520	49,928	141,889	6,312	148,201
1943–44(*a*) ..	132,559	887	133,446	51,410	384	51,794	183,969	1,271	185,240
1944–45(*a*) ..	155,731	491	156,222	59,919	203	60,122	215,650	694	216,344
1945–46(*a*) ..	159,355	367	159,722	55,310	296	55,606	214,665	663	215,328
1946–47(*a*) ..	154,419	340	154,759	53,379	162	53,541	207,798	502	208,300

(*a*) Commonwealth collections are greater than the Budget figures by the amount of refunds of State taxes. State collections are net arrears.

(ii) *Commonwealth Income Tax Assessed.* The amounts of Commonwealth taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year :—

COMMONWEALTH INCOME TAXES ASSESSED.

Tax.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
	£'000.	£'000.	£'000.	£'000.	£'000.
Individuals—					
Income Tax	38,974	83,227	147,064	(*b*)40,826	148,713
War Tax	8,378	..	..	..	..
Companies—					
Income Tax	19,916	35,764	38,012	42,470	41,629
Super Tax	2,713	3,208	3,305	3,804	3,761
War-time (Company) Tax ..	4,090	3,286	3,155	4,390	3,537
Undistributed income Taxes(*a*)—					
Private Companies	6,296	9,100	8,647	(*b*) 2,289	7,778
Non-Private Companies ..	2,397	1,758	1,713	1,988	2,068
Total	82,764	136,343	201,896	95,767	207,486

(*a*) Approximate (*b*) *See* note (*b*) on page 698.

(iii) *Commonwealth Income Tax on Residents in Grades of Income.* Individual income taxes assessed on residents were distributed according to grades of actual income (income before allowing deductions of a concessional nature or statutory exemptions and including exempt income) as follows :—

COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES OF ACTUAL INCOMES.

Grade of Actual Income.	1941–42.(*a*)		1942–43.(*a*)		1943–44.(*a*)		1944–45.(*a*)		1945–46.(*a*)	
	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax. (*b*)	No. of Tax-payers.	Tax
£ £		£'000.		£'000.		£'000.		£'000.		£'000.
Under £151	..	..	..	..	225,733	1,322	223,462	330	233,027	1,366
151– 200	187,000	394	193,605	961	245,136	3,307	252,091	875	256,892	3,635
201– 250	265,497	1,082	193,259	1,762	184,201	4,000	197,041	1,137	201,163	4,719
251– 300	316,872	2,173	276,287	3,890	235,491	6,590	231,564	1,756	247,432	7,637
301– 350	211,813	2,391	266,049	5,733	277,986	10,874	277,991	2,846	296,270	12,164
351– 400	119,371	2,076	182,714	5,515	240,417	12,439	254,095	3,381	249,404	13,206
401– 500	118,262	3,178	182,915	8,031	275,742	19,983	299,858	5,526	267,315	19,762
501– 600	51,500	2,156	71,949	4,821	108,627	11,468	120,818	3,258	112,115	12,253
601– 800	(*c*) 36,003	2,251	54,531	5,681	78,148	12,086	90,420	3,594	82,855	13,436
801– 1,000	(*d*) 27,418	2,804	23,675	4,021	31,027	7,405	35,161	2,143	32,221	7,991
1,001– 1,250	13,173	2,269	15,597	4,015	19,746	6,721	22,307	1,915	20,489	7,136
1,251– 1,500	7,720	1,996	9,026	3,329	11,423	5,327	12,839	1,517	11,552	5,471
1,501– 2,000	8,024	3,252	9,756	5,436	12,344	8,219	13,609	2,285	12,330	8,298
2,001– 3,000	6,509	5,063	7,619	7,702	9,375	10,550	10,491	2,993	9,175	10,441
3,001– 4,000	2,316	3,315	2,718	4,815	3,389	6,402	3,731	1,787	2,959	5,621
4,001– 5,000	1,158	2,469	1,223	3,182	1,502	4,048	1,616	1,108	1,358	3,675
5,001–10,000	1,507	5,301	1,667	7,317	1,977	8,866	2,051	2,312	1,526	6,687
10,001–15,000	264	1,826	276	2,402	309	2,728	332	755	234	1,888
15,001–30,000	(*e*) 112	1,254	152	2,342	145	2,121	171	638	125	1,702
30,001–50,000	(*f*) 46	910	28	767	28	793	28	190	18	502
50,001 and over	12	401	7	322	10	626	18	222	5	263
Total ..	1,374,577	46,561	1,493,053	82,044	1,962.756	145,875	2,049.694	40,568	2,038.465	147,853

(*a*) Year in which assessment was made. Incomes relate to previous year. (*b*) As a result of the introduction of the pay-as-you-earn system, the amount of tax assessed in 1944–45 on income derived in 1943–44 was reduced to approximately one-quarter of the amount which otherwise would have been payable. (*c*) Grade £601–£750. (*d*) Grade £751–£1,000. (*e*) Grade £15,001–£25,000 (*f*) Grade £25,001–£50,000.

CHAPTER XVI.

POPULATION.

Note.—The figures shown throughout this Chapter for the Census of 30th June, 1947, are the preliminary results only, and population estimates shown for the intercensal period 1933–47 are revised figures which have been adjusted in accordance with these results. Both sets of figures are subject to revision on completion of the detailed tabulation of the 1947 Census results.

§ 1. Population Statistics.

Australian population statistics comprise two types—firstly, those derived from Census counts, and, secondly, those derived between Census dates by the application of vital and migration statistics to the numbers recorded at the last Census. These intercensal estimates are subsequently revised in the light of the next Census results.

The results obtained at the Census attain a very high degree of accuracy and may generally be accepted without reservation.

Since the establishment of the Commonwealth Bureau of Census and Statistics attention has been given to the improvement of intercensal estimates. The principal source of error lay in the migration records and efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates of an amount equal to a percentage on the recorded oversea departures from Australia of 14.5 per cent. for males and 10 per cent. for females. These percentages were used as adjusting factors for recorded oversea departures during the intercensal period 1911–21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were finally discontinued after the 1933 Census. From the results of the 1947 Census it would again appear that the accuracy of the records of oversea migration is such that in future little adjustment to the recorded figures for Australia as a whole will be necessary. It should be noted, however, that the figures for oversea migration relate to passenger traffic and do not include crews of oversea vessels.

It is improbable that the same degree of accuracy as has been attained in the record of oversea migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, by rail, and by air, but it is impracticable to record the movements by road.

§ 2. The Census.

1. **Census-taking.**—Although "musters" of the population were carried out at least annually from 1788 to 1825 the first regular Census in Australia was not taken until 1828 when a count of the population of the Colony of New South Wales was made. Subsequent Censuses were taken sporadically in the various colonies until 1881 when a Census was taken on the same date throughout Australia.

In 1891 and 1901 Census-taking was still in the hands of the Government Statisticians of the States but, in 1911, under the provisions of the Commonwealth Census and Statistics Act, which provides for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first Census for the Commonwealth of Australia. The second was taken in 1921.

In accordance with the provisions of the Commonwealth Census and Statistics Act 1905–1920, the third Commonwealth Census would have been taken in 1931, but, owing to the necessity for economy in governmental expenditure, it was decided to defer the Census, and the date was subsequently fixed for 30th June, 1933.

Owing to the 1939–45 War the fourth Census, due to be taken in 1941, was deferred until June, 1947, the Census for the whole of Australia being taken as for the night between 29th and 30th June, 1947.

2. **Results of the Censuses.**—The results of the Censuses taken over the period 1828 to 1947 are shown in the following table :—

POPULATION : AUSTRALIAN CENSUSES, 1828 TO 1947.

Census Year.	Population Enumerated (Excluding Full-blood Aboriginals.)								
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	Australia Total
1828..	(Nov.) 36,598	..	..	..	..	..	..	..	.
1833..	(2nd Sept.) 60,794	..	..	..	..	..	..	..	.
1836..	(2nd Sept.) 77,096	..	..	..	..	..	..	..	.
1841..	(2nd Mar.) 130,856	..	..	..	..	(27th Sept.) 50,216	..	..	.
1844..	..	..	..	(26th Feb.) 17,366	..	..	..	..	.
1846..	(2nd Mar.) 189,609	..	..	(26th Feb.) 22,390	..	..	..	.	.
1847..	..	..	..	..	..	(31st Dec.) 70,164	..	..	.
1848..	..	..	..	..	(10th Oct.) 4,622	..	..	..	.
1851..	(a) (1st Mar.) 268,344	..	..	(1st Jan.) 63,700	..	(1st Mar.) 70,130	..	..	.
1854..	..	(26th April) (b) 234,928	..	..	(30th Sept.) 11,743	.	.	.	.
1855..	..	..	..	(31st Mar.) 85,821	..	..	..	..	.
1856..	(1st Mar.) 269,722	..	..	..	..	..	..	.	.
1857..	..	(29th Mar.) 408,998	..	..	..	(31st Mar.) 81,492	..	..	.
1859..	..	..	..	..	(31st Dec.) 14,837	..	..	..	.
1861..	(7th April) 350,860	(7th April) 538,628	(7th April) (b) 30,059	(7th April) 126,830	..	(7th April) 89,977	.	..	.
1864..	..	..	(1st Jan.) 61,467	..	..	..	..	..	.
1866..	..	..	..	(26th Mar.) 163,452	..	..	..	..	.
1868..	..	..	(2nd Mar.) 99,901	..	..	..	..	..	.
1870..	..	..	..	..	(31st Mar.) 24,785	(7th Feb.) 99,328	..	..	.
1871..	(2nd April) 502,998	(2nd April) 730,198	(1st Sept.) 120,104	(2nd April) 185,626	..	..	.	.	..
1876..	..	..	(1st May) 173,283	(26th Mar.) 213,271	..	..	..	..	..
1881(c)	749,825	861,566	213,525	(d)276,414	29,708	115,705	(e)3,451	..	2,250,194
1886..	..	..	(1st May) 322,853	..	..	..	..	..	..
1891(f)	1,123,954	1,139,840	393,718	(d)315,533	49,782	146,667	(e)4,898	..	3,174,392
1901(g)	1,354,846	1,201,070	498,129	(d)358,346	184,124	172,475	(e)4,811	.	3,773,801
1911(c)	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	(b) 1,714	4,455,005
1921(h)	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
1933(i)	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
1947(i) (j)..	2,985,464	2,055,252	1,106,269	646,216	502,731	257,117	10,866	16,905	7,580,820

(a) Including Port Phillip District which afterwards became the Colony of Victoria. (b) Part of New South Wales prior to 1911. (c) 3rd April. (d) Previously included figures for Northern Territory. (e) Previously included in figures for South Australia. Actually Northern Territory was not transferred to the Commonwealth until 1st January, 1911, and was previously part of South Australia. (f) 5th April. (g) 31st March. (h) 4th April. (i) 30th June. (j) Preliminary count.

The population of each State and Territory as at the Censuses of 1933 and 1947 is shown in the following table :—

POPULATION OF STATES : 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	30th June, 1933.			30th June, 1947. (Preliminary Count.)		
	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales ..	1,318,471	1,282,376	2,600,847	1,492,827	1,492,637	2,985,464
Victoria	903,244	917,017	1,820,261	1,014,508	1,040,744	2,055,252
Queensland.. ..	497,217	450,317	947,534	567,539	538,730	1,106,269
South Australia ..	290,962	289,987	580,949	320,220	325,996	646,216
Western Australia ..	233,937	204,915	438,852	258,303	244,428	502,731
Tasmania	115,097	112,502	227,599	129,285	127,832	257,117
Northern Territory ..	3,378	1,472	4,850	7,379	3,487	10,866
Australian Capital Territory.. ..	4,805	4,142	8,947	9,092	7,813	16,905
Australia ..	3,367,111	3,262,728	6,629,839	3,799,153	3,781,667	7,580,820

3. **Increase since 1881 Census.**—(i) *Australia.* The increase of population during the fourteen years between the 1933 Census and the 1947 Census (preliminary count) was 950,981 of which 432,042 were males and 518,939 were females, as compared with an increase of 1,194,105, comprising 604,241 males and 589,864 females, for the preceding intercensal period of 12¼ years. The population enumerated at each Census from 1881 to 1947 was as follows :—

POPULATION OF AUSTRALIA AT EACH CENSUS, 1881 TO 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Date.	Males.	Females.	Persons.	Masculinity.(*a*)
3rd April, 1881	1,214,913	1,035,281	2,250,194	117.35
5th April, 1891	1,704,039	1,470,353	3,174,392	115.89
31st March, 1901	1,977,928	1,795,873	3,773,801	110.14
3rd April, 1911	2,313,035	2,141,970	4,455,005	107.99
4th April, 1921	2,762,870	2,672,864	5,435,734	103.37
30th June, 1933	3,367,111	3,262,728	6,629,839	103.20
30th June, 1947(*b*)	3,799,153	3,781,667	7,580,820	100.46

(*a*) Number of males per 100 females. (*b*) Preliminary count.

(ii) *States and Territories.* The postponement till 1933 and 1947 of the Censuses which ordinarily would have been taken in 1931 and 1941 respectively destroyed the continuity of the decennial intercensal period which had obtained in Australia since 1881, and consequently, with the exception of the percentage increases per annum shown for Australia, which have been included to give a true comparison of the rate of growth during each intercensal period for Australia as a whole, the increases shown in the following table for the periods 1921–33 (12¼ years) and 1933–47 (14 years) are not directly comparable with each other nor with the results shown for the earlier periods.

The increases in the population of the several States and Territories during the last six intercensal periods have been as follows :—

POPULATION : INTERCENSAL INCREASES.

State or Territory.		1881–1891.	1891–1901.	1901–1911.	1911–1921.	1921–1933. (12¼ years)	1933–1947. (14 years) (c)
New South Wales ..	Number	(a) 374,129	(a)230,892	(a)293,602	453,637	500,476	384,617
	Per cent.	(a) 49.90	(a) 20.54	(a)21.67	27.55	23.83	14.79
Victoria	Number	278,274	61,230	114,481	215,729	288,981	234,991
	Per cent.	32.30	5.37	9.53	16.40	18.87	12.91
Queensland ..	Number	180,193	104,411	107,684	150,159	191,562	158,735
	Per cent.	84.39	26.52	21.62	24.79	25.34	16.75
South Australia ..	Number	39,119	42,813	50,212	86,602	85,789	65,267
	Per cent.	14.15	13.57	14.01	21.20	17.33	11.23
Western Australia ..	Number	20,074	134,342	97,990	50,618	106,120	63,879
	Per cent.	67.57	269.86	53.22	17.94	31.89	14.56
Tasmania ..	Number	30,962	25,808	18,736	22,569	13,819	29,518
	Per cent.	26.76	17.60	10.86	11.80	6.46	12.97
Northern Territory	Number	1,447	− 87	−1,501	557	983	6,016
	Per cent.	41.93	− 1.78	−31.20	16.83	25.42	124.04
Australian Capital Territory ..	Number	(b)	(b)	(b)	858	6,375	7,958
	Per cent.	(b)	(b)	(b)	50.06	247.86	88.95
Australia ..	Number ..	924,198	599,409	681,204	980,729	1,194,105	950,981
	Per cent...	41.07	18.88	18.05	22.01	21.97	14.34
	Per cent. per annum	3.50	1.74	1.67	2.01	1.63	0.96

(a) Including Australian Capital Territory. (b) Part of New South Wales prior to 1911. (c) Subject to revision; based on preliminary count for 1947 Census.

NOTE.—Minus sign (−) denotes decrease.

The numerical increase during the period 1933–47 (14 years) was less by 243,124 than that for the period 1921–33 (12¼ years) and the percentage increase declined from 21.97 for 1921–33 to 14.34 for 1933–47. During the earlier period the increase corresponds to 1.63 per cent. per annum, and in the latter to 0.96 per cent. per annum.

§ 3. Distribution and Fluctuation of Population.

1. **Present Numbers.**—The population of Australia on 31st December, 1946, was estimated at 7,519,246 persons of whom 3,768,255, or 50.11 per cent., were males and 3,750,991 or 49.89 per cent., were females. These estimates are revised figures adjusted in accordance with the preliminary results of the 1947 Census. The increase during 1946, excluding deaths of defence personnel, was 88,479, equal to 1.19 per cent., males having increased by 45,534, or 1.22 per cent., and females by 42,945, or 1.14 per cent. On recorded figures, this increase was entirely due to the excess of births over deaths, namely, 101,718, there being a net loss by migration of 15,148 persons. The balance of 1,909 persons represents an unrecorded gain in population disclosed by the preliminary results of the 1947 Census. Recorded deaths of defence personnel numbered 531 of whom 522 were males and 9 females. The net increase in the population for 1946 has therefore been taken as 87,948—45,012 males and 42,936 females.

2. **Growth and Distribution.**—The abridged table which follows shows the growth in the population of the various States and Territories from 1788 to 1946. Details as to sex for the years 1788 and 1790 are not available.

ESTIMATED POPULATION : 1788 TO 1946.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr	Australia.
					MALES.				
1800*a*	3,780	..	..	..	..	..	..	..	3,780
1810	6,611	..	..	..	..	974	..	..	7,585
1820	19,626	..	..	..	..	4,158	..	..	23,784
1830	33,900	..	..	..	877	18,108	..	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	238,683
1860	197,851	(*b*)330,302	(*b*)16,817	64,340	9,597	49,653	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,854	76,453	..	..	1,692,831
1900	716,047	601,773	274 684	180,349	110,088	89,763	(*c*)4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(*b*)1,062	2,751,730
1930	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3.311,722
1933*d*	1,324,945	904,870	497,452	291,726	234,750	116,925	3,373	5,043	3,379,084
1934*d*	1,335,450	909,805	502,462	292,531	236,154	117,052	3,448	5,065	3,401,967
1935*d*	1,344,857	910,733	508,315	293,668	238,764	118,140	3,494	5,233	3,423,204
1936*d*	1,356,234	913,950	514,107	294,835	240,863	119,060	3,612	5,606	3,448,267
1937*d*	1,369,484	916,964	519,627	295,655	244,100	121,166	3,661	5,953	3,476,610
1938*d*	1,381,422	924,030	525,202	297,607	247,008	122,463	3,850	6,376	3,507,958
1939*de*	1,393,798	929,466	531,968	299,217	249,145	123,239	5,145	7,188	3,539,166
1940*de*	1,402,696	946,973	536,610	297,880	248,802	123,696	6,340	7,849	3,570,847
1941*de*	1,410,805	964,553	537,744	301,625	246,879	122,185	7,251	7,725	3,598,766
1942*de*	1,428,067	970,887	534,703	303,556	246,889	122,461	6,045	7,632	3,620,240
1943*de*	1,436,519	979,884	542,738	305,755	246,495	123,077	7,208	7,360	3,649,036
1944*de*	1,449,933	987,323	548,888	308,989	249,428	124,301	7,229	7,822	3,683,913
1945*de*	1,465,114	995,333	556,912	312,754	251,741	125,859	7,249	8,281	3,723,243
1946*de*	1,481,172	1,006,990	563,069	317,413	255,493	128,039	7,261	8,818	3,768,255
					FEMALES.				
1800*a*	1,437	..	..	..	..	..	..	..	1,437
1810	3,485	..	..	..	..	496	..	..	3,981
1820	8,398	..	..	..	..	1,361	..	..	9,759
1830	10,688	..	..	..	295	6,171	..	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(*b*)207,932	(*b*)11,239	61,242	5,749	40,168	..	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	..	745,262
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(*c*) 569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(*b*) 910	2,659,567
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029
1933*d*	1,288,691	919,347	451,677	291,017	205,899	115,253	1,454	4,298	3,277,636
1934*d*	1,301,115	926,846	457,340	291,953	207,593	114,593	1,523	4,391	3,305,354
1935*d*	1,313,381	930,842	462,915	293,087	210,889	115,295	1,642	4,527	3,332,578
1936*d*	1,326,325	935,629	468,779	294,925	213,380	116,729	1,753	4,798	3,362,318
1937*d*	1,342,369	939,992	474,837	296,131	216,500	118,428	1,770	5,090	3,395,117
1938*d*	1,356,149	947,037	480,176	298,223	219,750	119,686	1,889	5,345	3,428,255
1939*de*	1,373,068	953,627	487,959	300,084	223,324	120,057	2,151	5,847	3,466,117
1940*de*	1,388,659	967,840	494,626	301,149	225,352	120,348	2,637	6,307	3,506,918
1941*de*	1,402,555	981,757	500,462	304,697	226,381	119,978	2,505	6,433	3,544,768
1942*de*	1,420,411	991,771	503,013	307,440	229,851	119,992	2,235	6,475	3,581,188
1943*de*	1,434,544	1,002,005	511,688	310,341	231,887	121,184	3,188	6,433	3,621,270
1944*de*	1,451,498	1,010,997	519,235	314,142	235,489	122,591	3,240	6,783	3,663,975
1945*de*	1,468,322	1,020,250	527,846	318,258	238,515	124,422	3,291	7,151	3,708,055
1946*de*	1,481,760	1,033,291	533,614	323,139	241,684	126,560	3,375	7,568	3.750.991

(*a*) Details as to sex not available for years 1788 and 1790. (*b*) Part of New South Wales prior to 1911. (*c*) Previously included with South Australia in which Northern Territory was incorporated prior to 1911. (*d*) Adjusted in accordance with the preliminary results of the Census of 30th June, 1947 and subject to further revision. (*e*) *See* note (*d*) next page.

ESTIMATED POPULATION—*continued.*

PERSONS.

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia
1788	859	..	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	..	5,217
1810	10,096	..	..	..	..	1,470	..	..	11,566
1820	28,024	..	..	..	..	5,519	..	..	33,543
1830	44,588	..	..	..	1,172	24,279	..	..	70,039
1840	127,468	..	..	14,630	2,311	45,999	..	..	190,408
1850	266,900	..	..	63,700	5,886	68,870	..	..	405,356
1860	348,546	(a)538,234	(a)28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(b)4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	(a)1,972	5,411,297
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,964	8,719	6,500,751
1933c	2,613,636	1,824,217	949,129	582,743	440,649	232,178	4,827	9,341	6,656,720
1934c	2,636,565	1,836,651	959,802	584,484	443,747	231,645	4,971	9,456	6,707,321
1935c	2,658,238	1,841,575	971,230	586,755	449,653	233,435	5,136	9,760	6,755,782
1936c	2,682,559	1,849,579	982,886	589,760	454,243	235,789	5,365	10,404	6,810,585
1937c	2,711,853	1,856,956	994,464	591,786	460,600	239,594	5,431	11,043	6,871,727
1938c	2,737,571	1,871,067	1,005,378	595,830	466,758	242,149	5,739	11,721	6,936,213
1939cd	2,766,866	1,883,093	1,019,927	599,301	472,469	243,296	7,296	13,035	7,005,283
1940cd	2,791,355	1,914,813	1,031,236	599,029	474,154	244,044	8,977	14,156	7,077,764
1941cd	2,813,360	1,946,310	1,038,206	606,322	473,260	242,163	9,756	14,158	7,143,535
1942cd	2,848,478	1,962,658	1,037,716	610,996	476,740	242,453	8,280	14,107	7,201,428
1943cd	2,871,063	1,981,889	1,054,426	616,096	478,382	244,261	10,396	13,793	7,270,306
1944cd	2,901,431	1,998,320	1,068,123	623,131	484,917	246,802	10,469	14,005	7,347,888
1945cd	2,933,436	2,015,583	1,084,758	631,012	490,256	250,281	10,540	15,432	7,431,298
1946cd	2,962,932	2,040,281	1,096,683	640,552	497,177	254,599	10,636	16,386	7,519,246

(a) Part of New South Wales prior to 1911. (b) Previously included with South Australia in which Northern Territory was incorporated prior to 1911. (c) Adjusted in accordance with the preliminary results of the Census of 30th June, 1947 and subject to further revision. (d) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

Estimates of population for intercensal years are obtained by applying the vital and migration statistics for those years to the numbers recorded at the Census. Figures for interstate migration are liable to error owing to the impracticability of tracing movements of motor traffic. The estimates of populations of the Australian Capital Territory and the Northern Territory are particularly affected by this difficulty. In view of the uncertainty of war-time records of interstate migration, the populations of the States subsequent to 30th June, 1943, have been estimated on the basis of natural increase, deaths of defence personnel and oversea migration.

The extent of the unrecorded movement of population during the preceding intercensal period is determined when a Census is taken and it is the custom to adjust these intercensal estimates on the basis of the Census results. Estimates of population previously published for the period 1st July, 1939, to 30th June, 1943, had been revised in the light of data obtained from the Civilian Register of June, 1943, but these interim adjustments have now been excluded and a general revision has been made of population estimates for the complete intercensal period.

The results of the 1947 Census of the Australian Territories will be found in § 11 of this chapter.

A comparison of annual rates of growth of population of Australia and other countries will be found in § 4 par. 4 of this chapter.

The growth of the population of Australia and of each State and Territory thereof is illustrated by the graph accompanying this chapter on page 711.

3. **Mean Population.**—(i) *Method of Calculation.* From 1901 onwards the mean population for any year has been calculated by the formula :—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where a, b, c, d and e, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters, e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population. Prior to 1901 the mean population was calculated only for calendar years and was obtained by taking the arithmetic mean of the populations at the end of the previous year and the year in question progressing smoothly through the five values a, b, c, d, e.

In view of the tentative nature of the interstate population estimates subsequent to 30th June, 1943, the mid-year estimates were adopted in the previous issue of the Year Book as the mean of years covering periods which follow that date. Following the general revision of intercensal population estimates in accordance with the preliminary results of the Census of 30th June, 1947, however, mean populations for the calendar years 1943 onwards and for the financial years 1943–44 onwards have been computed on the customary basis and are shown in the following tables.

(ii) *Calendar Years.* The following table shows the mean population, adjusted in accordance with the preliminary results of the 1947 Census, for each State and Territory for the calendar years 1933 to 1946 :—

MEAN POPULATION : CALENDAR YEARS, 1933 to 1946.(*a*)

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia
1933 ..	2,601,807	1,820,496	945,476	581,034	438,783	228,450	4,863	9,078	6,629,987
1934 ..	2,623,784	1,830,320	955,781	583,469	442,367	229,294	4,951	9,434	6,679,400
1935 ..	2,646,008	1,838,191	966,599	585,261	446,898	229,877	5,138	9,735	6,727,707
1936 ..	2,668,516	1,845,918	979,219	587,926	452,329	231,438	5,308	10,294	6,780,948
1937 ..	2,695,626	1,853,731	990,539	589,652	457,378	234,484	5.481	10,900	6,837,791
1938 ..	2,722,722	1,865,216	1,001,866	593,231	463,874	236,353	5,812	11,534	6,900,608
1939(*b*)	2,750,617	1,878,883	1,014,886	597,036	469,862	238,880	6,393	12,505	6,969,062
1940(*b*)	2,778,328	1,900,352	1,026,349	599,115	473,480	241,175	8,361	13,774	7,040,934
1941(*b*)	2,800,900	1,932,299	1,036,313	601,155	474.051	240,425	10,274	14,624	7,110,041
1942(*b*)	2,831.415	1.959.500	1,035,778	609,151	476,688	241,107	8,934	14,224	7,176.797
1943(*b*)	2,857,894	1.973,706	1,047,229	613,369	476,846	242,873	9,563	13,638	7,235,118
1944(*b*)	2,886,576	1,990,192	1,061,325	619,496	481,630	245,623	10,432	14,198	7,309,472
1945(*b*)	2,917,823	2,007,083	1,076,498	627,221	487,667	248,598	10,505	15,012	7,390,407
1946(*b*)	2,945,724	2,025,976	1,090,123	635,260	492,959	252,207	10,561	15,885	7,468,695

(*a*) Subject to revision. (*b*) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

(iii) *Financial Years.* The mean population for financial years is widely used in connexion with rates for those statistics which are tabulated on a financial year basis The following table shows the mean population, adjusted in accordance with the preliminary results of the 1947 Census, for each State and Territory for the years ended 30th June, 1934 to 1947 :—

MEAN POPULATION : FINANCIAL YEARS, 1933–34 to 1946–47.(*a*)

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Ter.	Australia
1934 ..	2,613,173	1,824,658	950,446	582,458	440,744	229,108	4,893	9,382	6,654,862
1935 ..	2,634,688	1,835,568	961,158	584,349	444,293	229,346	5,047	9,540	6,703,989
1936 ..	2,657,062	1,841,616	972,701	586,505	449,758	230,700	5,209	9,966	6,753,517
1937 ..	2,681,537	1,850,041	984,865	588,742	454,575	232,669	5,380	10,617	6,808,426
1938 ..	2,709,974	1,858,550	996,332	591,303	460,700	235,652	5,618	11,179	6,869,308
1939	2,735,778	1,872,253	1,008,062	595,119	466,970	237,667	5,942	11,965	6,933,756
1940(*b*)	2,764,660	1,886,703	1,021,255	598,776	472,146	240,061	7,263	13,225	7,004,089
1941(*b*)	2,790,490	1,916,624	1,031,905	598,871	474,256	241,050	9,542	14,306	7,077,044
1942(*b*)	2,813,718	1,948,628	1,036,439	605,913	474.890	240,386	9,868	14,332	7,144,174
1943(*b*)	2,846,148	1,965,566	1,040,218	610,936	477,073	241,720	8,711	14,016	7,204,388
1944(*b*)	2,871,808	1,982,255	1,054,646	616,218	478,388	244,187	10,399	13,793	7,271,694
1945(*b*)	2,901,849	1,998,575	1,068,503	623,207	484,866	246,975	10,469	14,605	7,349,049
1946(*b*)	2,932,806	2,015,670	1,084,019	631,050	490,151	250,313	10,530	15,431	7,429,970
1947(*b*)	2,963,621	2,039,875	1,097,168	640,489	497,219	254,583	10.671	16,383	7,520,009

(*a*) Subject to revision. (*b*) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

4. **Proportion of Area and Population, Density and Masculinity.**—A previous table showed the estimated number of persons in each of the States and Territories on 31st December, 1946. In the following table the percentages of the total area and of the total population represented by each State or Territory are given, together with the density and the masculinity of population :—

DENSITY AND MASCULINITY OF POPULATION, 1946.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Percentage of Total Area.	Percentage of Estimated Population, 31st December, 1946.			Density. (*a*)	Masculinity. (*b*)
		Males.	Females.	Persons.		
	%	%	%	%		
New South Wales	10.40	39.31	39.50	39.40	9.58	99.96
Victoria	2.96	26.72	27.55	27.13	23.22	97.45
Queensland	22.54	14.94	14.23	14.59	1.64	105.52
South Australia	12.78	8.42	8.61	8.52	1.69	98.23
Western Australia	32.81	6.78	6.44	6.61	0.51	105.71
Tasmania	0.88	3.40	3.38	3.39	9.71	101.17
Northern Territory ..	17.60	0.19	0.09	0.14	0.02	215.14
Australian Capital Territory ..	0.03	0.24	0.20	0.22	17.45	116.52
Australia	100.00	100.00	100.00	100.00	2.53	100.46

(*a*) Number of persons per square mile. (*b*) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

5. **Urban and Rural Distribution.**—At the 1947 Census, information was obtained regarding the distribution of the population amongst metropolitan, provincial and rural areas. Metropolitan Divisions relate to the capital cities of the States and adjoining urban municipal areas within boundaries used for Census purposes at the dates of the respective Censuses. At the 1947 Census the Metropolitan Division of Victoria included areas (with a population of 30,490 persons) not included in that division at the 1933 Census when the population was 991,934. No changes occurred in boundaries of Metropolitan Divisions in other States.

Urban Provincial Divisions comprise the capital cities of the Territories and, in States other than Tasmania, cities and towns outside the Metropolitan Divisions which are separately incorporated. In Tasmania, where most of the towns included are not separately incorporated, boundaries were determined for Census purposes. In New South Wales a number of towns which in 1933 were separately incorporated have since been included in shires.

Rural Divisions comprise the remaining portion of each Territory and State and are affected by the intercensal changes in the areas of the Metropolitan and Urban Provincial Divisions. Figures for Rural Divisions represent therefore only a broad general classification based on administration principles rather than geographical. For instance, in New South Wales most of the increase in population shown for "Rural Division" was due to abolition of municipalities which in 1933 were classified as Urban Provincial; in Victoria a large part of the decrease in population shown for "Rural Division" was due to transfer in 1947 to the Metropolitan Division of adjoining urban parts of shire areas

Persons on board ships in Australian ports or travelling on long-distance trains or planes throughout Census night were classed as migratory.

The results obtained at the Census for each State and Territory are shown in the following table :—

URBAN AND RURAL POPULATION : 1947 CENSUS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Division.	1947 Census. (Preliminary Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census.
	Males.	Females.	Persons.	1933 Census.	1947 Census.	
NEW SOUTH WALES.						
Urban—				%	%	%
Metropolitan	715,168	769,266	1,484,434	47.50	49.72	20.17
Provincial ..	330,600	333,090	663,690	21.74	22.23	17.38
Rural ..	440,431	389,580	830,011	30.57	27.80	4.39
Migratory ..	6,628	701	7,329	0.19	0.25	45.45
Total ..	1,492,827	1,492,637	2,985,464	100.00	100.00	14.79

URBAN AND RURAL POPULATION, ETC.—*continued.*

Division.	1947 Census. (Preliminary Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census
	Males.	Females.	Persons.	1933 Census.	1947 Census.	
VICTORIA.						
Urban—				%	%	%
Metropolitan	588,996	637,927	1,226,923	54.49	59.70	23.69
Provincial ..	111,311	120,253	231,564	10.89	11.26	16.84
Rural ..	311,109	281,809	592,918	34.53	28.85	—5.67
Migratory ..	3,092	755	3,847	0.09	0.19	143.79
Total ..	1,014,508	1,040,744	2,055,252	100.00	100.00	12.91
QUEENSLAND.						
Urban—				%	%	%
Metropolitan	195,238	206,934	402,172	31.63	36.36	34.17
Provincial ..	128,034	131,081	259,115	21.02	23.42	30.11
Rural ..	242,557	200,538	443,095	46.92	40.05	—0.34
Migratory ..	1,710	177	1,887	0.43	0.17	—53.44
Total ..	567,539	538,730	1,106,269	100.00	100.00	16.75
SOUTH AUSTRALIA.						
Urban—				%	%	%
Metropolitan	183,229	199,375	382,604	53.81	59.21	22.39
Provincial ..	32,658	33,253	65,911	8.86	10.20	28.09
Rural ..	102,807	93,192	195,999	36.97	30.33	—8.74
Migratory ..	1,526	176	1,702	0.36	0.26	—19.41
Total ..	320,220	325,996	646,216	100.00	100.00	11.23
WESTERN AUSTRALIA.						
Urban—				%	%	%
Metropolitan	131,717	140,869	272,586	47.27	54.22	31.40
Provincial ..	26,284	25,526	51,810	10.21	10.31	15.63
Rural ..	97,488	77,707	175,195	41.79	34.85	—4.48
Migratory ..	2,814	326	3,140	0.73	0.62	—1.81
Total ..	258,303	244,428	502,731	100.00	100.00	14.56

NOTE.—Minus sign (—) denotes decrease.

URBAN AND RURAL POPULATION, ETC.—*continued.*

Division.	1947 Census. (Preliminary Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census
	Males.	Females.	Persons.	1933 Census.	1947 Census.	
			TASMANIA.			
Urban—				%	%	%
Metropolitan	36,542	40,025	76,567	26.54	29.78	26.75
Provincial ..	36,302	38,523	74,825	24.95	29.10	31.79
Rural ..	55,777	49,245	105,022	48.23	40.85	−4.32
Migratory ..	664	39	703	0.28	0.27	8.32
Total ..	129,285	127,832	257,117	100.00	100.00	12.97
			NORTHERN TERRITORY.			
Urban—				%	%	%
Provincial ..	1,669	869	2,538	32.29	23.36	62.07
Rural ..	5,581	2,609	8,190	66.16	75.37	155.22
Migratory ..	129	9	138	1.55	1.27	84.00
Total ..	7,379	3,487	10,866	100.00	100.00	124.04
			AUSTRALIAN CAPITAL TERRITORY.			
Urban—				%	%	%
Provincial ..	8,121	7,035	15,156	81.87	89.65	106.91
Rural ..	971	778	1,749	18.13	10.35	7.83
Migratory ..	..	..	..	..	..	..
Total ..	9,092	7,813	16,905	100.00	100.00	88.95
			AUSTRALIA.			
Urban—				%	%	%
Metropolitan	1,850,890	1,994,396	3,845,286	46.87	50.72	23.75
Provincial ..	674,979	689,630	1,364,609	16.97	18.00	21.33
Rural ..	1,256,721	1,095,458	2,352,179	35.91	31.03	−1.21
Migratory ..	16,563	2,183	18,746	0.25	0.25	12.22
Total ..	3,799,153	3,781,667	7,580,820	100.00	100.00	14.34

NOTE.—Minus sign (−) denotes decrease.

At 30th June, 1947, the Metropolitan Divisions contained 50.72 per cent. of the total population of Australia as compared with 46.87 per cent. at the 1933 Census. Victoria had the largest percentage of population residing in the metropolitan area (59.70) but was closely followed in this respect by South Australia (59.21) During the intercensal period, however, the highest rates of increase in metropolitan population were experienced in Queensland and Western Australia.

A feature of the metropolitan population is its high femininity. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947 the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.

6. **Metropolitan Population : Australia and Other Countries.**—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of the more important countries is given in the following table. There is some doubt as to the comparability of the figures because of the abnormal conditions during the war and immediately following the war.

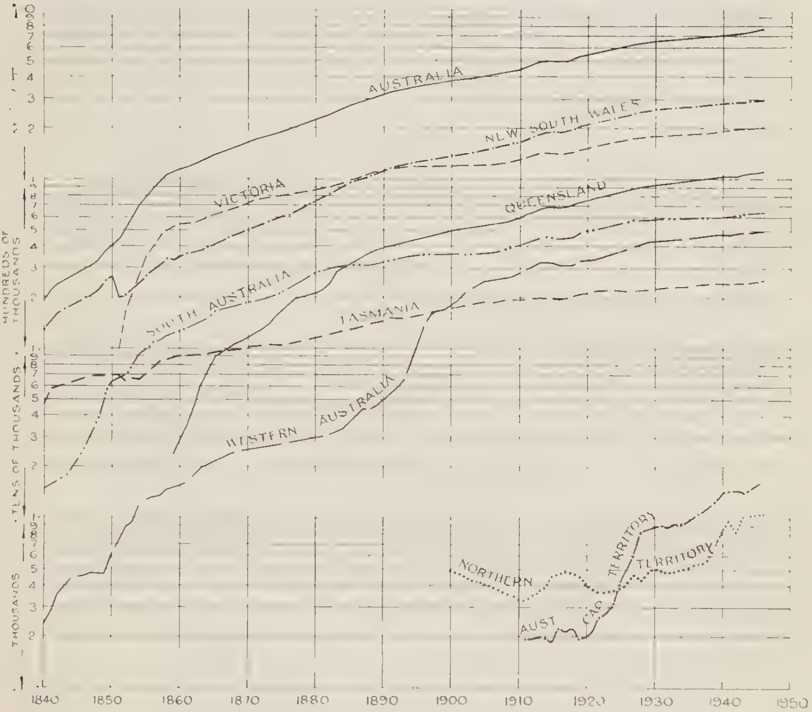
METROPOLITAN POPULATION : AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Metropolitan Population.
New South Wales	Sydney	1947	1,484,434(*a*)
Victoria	Melbourne	1947	1,226,923(*a*)
Queensland	Brisbane	1947	402,172(*a*)
South Australia	Adelaide	1947	382,604(*a*)
Western Australia	Perth	1947	272,586(*a*)
Tasmania	Hobart	1947	76,567(*a*)
England	London (*b*)	1947	8,244,370
Scotland	Edinburgh	1947	485,700
Northern Ireland	Belfast	1947	449,991
Eire	Dublin	1947	513,500
Canada	Montreal (*c*)(*d*)	1941	1,139,921
New Zealand	Wellington(*e*)	1946	180,100
Union of South Africa	Capetown(*f*)	1946	214,201
Argentina	Buenos Aires	1945	2,485,355
Belgium	Brussels	1945	911,699
Brazil	Rio de Janeiro	1938	1,849,000
Czechoslovakia	Prague	1946	923,946
Denmark	Copenhagen	1945	927,404
Egypt	Cairo	1947	2,100,486
France	Paris	1946	2,725,374
Germany	Berlin	1939	4,332,242
Greece	Athens	1938	499,360
Hungary	Budapest	1946	1,026,883
Italy	Rome	1947	1,551,520
Japan	Tokyo (*g*)	1940	6,778,804
Netherlands	Amsterdam	1947	798,358
Norway	Oslo	1946	289,000
Poland	Warsaw	1946	476,538
Portugal	Lisbon	1940	709,179
Spain	Madrid	1947	1,187,142
Sweden	Stockholm	1947	690,108
U.S.A.	New York (*d*)	1947	7,835,000
U.S.S.R. (Russia)	Moscow	1939	4,137,018

(*a*) Preliminary Census count. (*b*) Greater London. (*c*) Greater Montreal. (*d*) Principal City. (*e*) Including Maoris. (*f*) European population. (*g*) Greater Tokyo.

NOTE.—The population of Canberra in 1947 was 15,156.

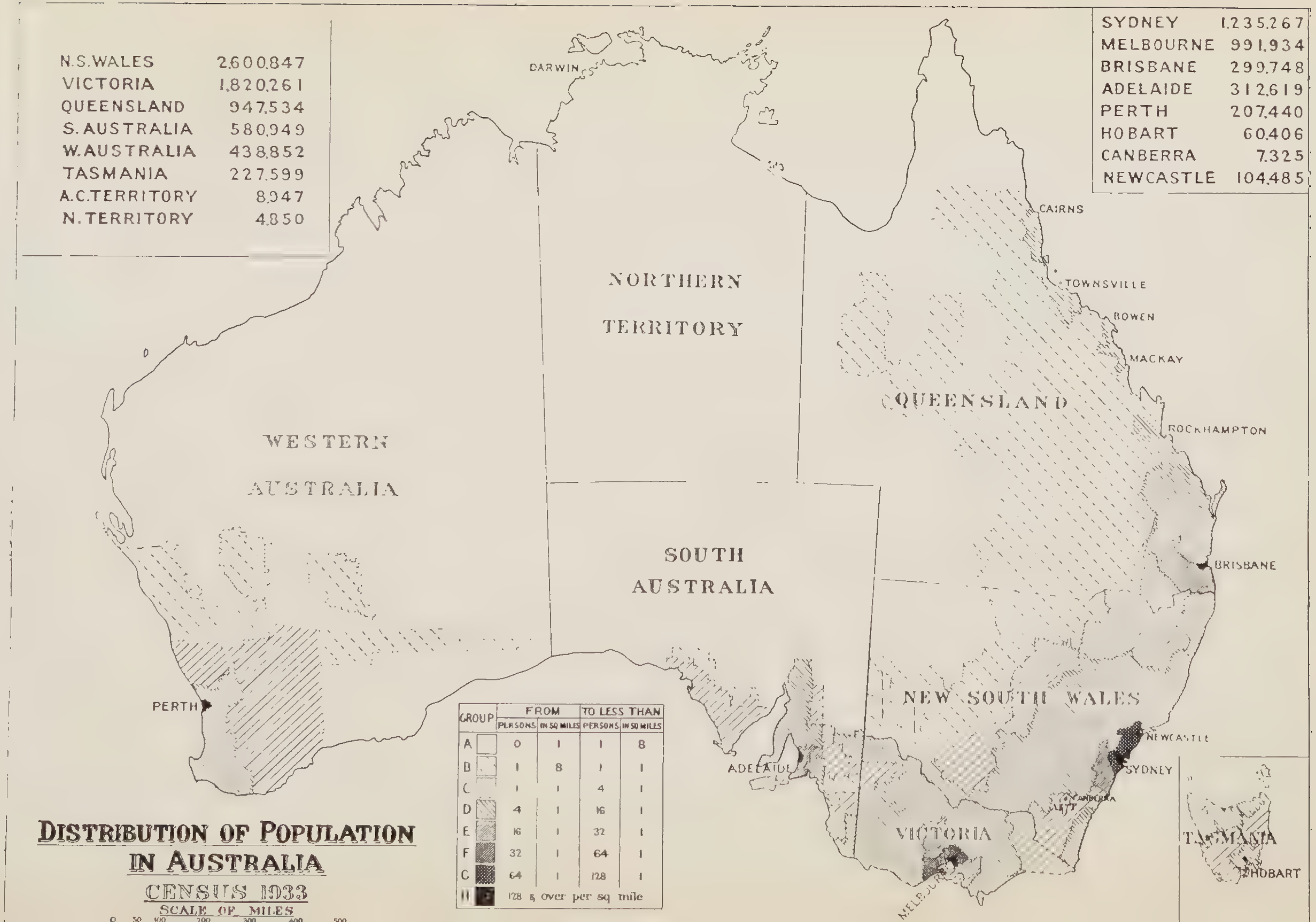
POPULATION OF AUSTRALIA, 1840 TO 1946 (RATIO GRAPH).



(See page 704.)

EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic, and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

The curves represent the estimated population of each State at 31st December each year.


DARWIN
CAIRNS
TOWNSVILLE
BOWEN
MACKAY
ROCKHAMPTON
BRISBANE
NEWCASTLE
SYDNEY
CANBERRA
MELBOURNE
HOBART
ADELAIDE
PERTH
WESTERN AUSTRALIA
NORTHERN TERRITORY
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
TASMANIA
SCALE OF MILES
0 50 100 200 300 400 500

DISTRIBUTION OF POPULATION IN AUSTRALIA

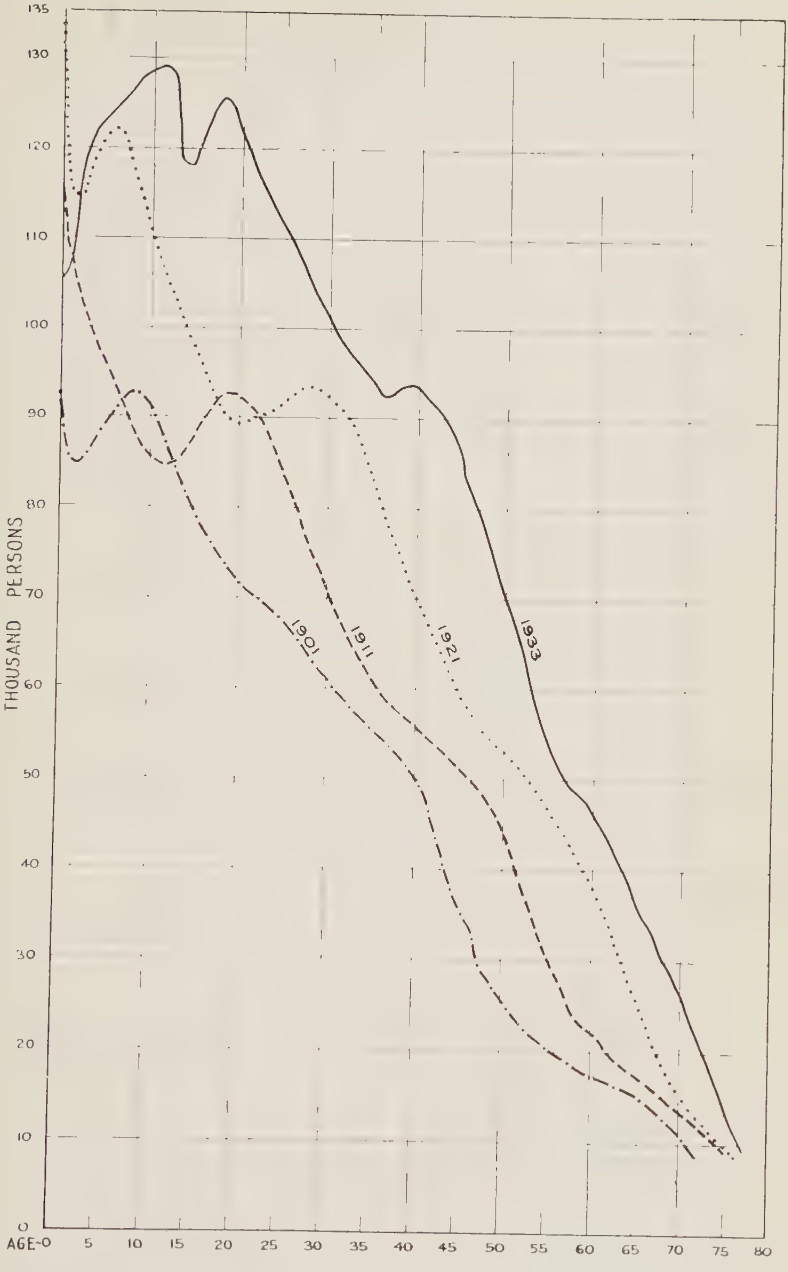
CENSUS 1933

N.S.WALES	2,600,847
VICTORIA	1,820,261
QUEENSLAND	947,534
S. AUSTRALIA	580,949
W. AUSTRALIA	438,852
TASMANIA	227,599
A.C.TERRITORY	8,947
N. TERRITORY	4,850

SYDNEY	1,235,267
MELBOURNE	991,934
BRISBANE	299,748
ADELAIDE	312,619
PERTH	207,440
HOBART	60,406
CANBERRA	7,325
NEWCASTLE	104,485

GROUP		FROM		TO LESS THAN	
		PERSONS	IN SQ MILES	PERSONS	IN SQ MILES
A	☐	0	1	1	8
B	⬚	1	8	1	1
C	░	1	1	4	1
D	▨	4	1	16	1
E	▒	16	1	32	1
F	▓	32	1	64	1
C	▓	64	1	128	1
H	■	128 & over per sq mile			

AUSTRALIA—GRADUATED AGE DISTRIBUTION OF POPULATION, CENSUSES OF 1901 1911, 1921 and 1933.



EXPLANATION.—This graph affords a comparison between the age distribution of the population at each of the four censuses covered.

7. **Principal Urban Areas.**—The following table gives the population of the principal urban incorporated areas in each State and Territory of Australia at the 1947 Census :—

POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS: AUSTRALIA, 1947 CENSUS.

(Excluding Full-blood Aboriginals.)

City or Town.	Population.
New South Wales—	
Sydney and Suburbs	1,484,434
Newcastle and Suburbs	127,188
Broken Hill	27,059
Maitland	19,156
Wollongong	18,116
Goulburn	16,029
Fairfield	15,984
Wagga Wagga	15,351
Lismore	15,211
Lithgow	14,462
Albury	14,419
Orange	13,785
Cessnock	13,030
Liverpool	12,648
Tamworth	12,071
Grafton and South Grafton ..	12,036
Bathurst	11,889
Illawarra North	11,810
Cabramatta and Canley Vale ..	10,963
Dubbo	9,540
Katoomba	8,778
Armidale	7,809
Parkes	6,895
Casino	6,695
Inverell	6,529
Kempsey	6,316
Forbes	5,949
Cowra	5,474
Glen Innes	5,462
Victoria—	
Melbourne and Suburbs ..	1,226,923
Geelong (*a*)	(*d*) 44,641
Ballarat (*b*)	(*d*) 40,214
Bendigo (*c*)	(*d*) 30,778
Warrnambool	9,997
Mildura	9,528
Shepparton	7,914
Hamilton	7,181
Wangaratta	6,669
Horsham	6,390
Colac	6,380
Maryborough	6,207
Ararat	5,060
Castlemaine	5,808
Queensland—	
Brisbane and Suburbs	402,172
Rockhampton	34,983
Townsville	34,233
Queensland—*continued.*	
Toowoomba	33,326
Ipswich	26,218
Cairns	16,641
Bundaberg	15,921
Maryborough	14,409
Mackay	13,500
Redcliffe	8,888
Southport	8,432
Gympie	8,413
Charters Towers	7,567
Warwick	7,130
South Australia—	
Adelaide and Suburbs	382,604
Port Pirie	12,030
Whyalla	7,845
Mount Gambier	6,787
Gawler	4,427
Port Augusta	4,350
Port Lincoln	3,963
Murray Bridge	3,689
Peterborough	2,890
Western Australia—	
Perth and Suburbs	(*e*) 272,586
Kalgoorlie and Suburbs ..	22,380
Bunbury	6,240
Geraldton	5,974
Albany	4,761
Northam	4,653
Collie	4,507
Tasmania—	
Hobart and Suburbs	76,567
Launceston and Suburbs ..	40,449
Burnie	7,237
Devonport	7,499
Queenstown	3,599
Ulverstone	3,431
Northern Territory—	
Darwin	2,538
Australian Capital Territory—	
Canberra	15,156

(*a*) Comprises municipalities of Geelong, Geelong West, and Newtown and Chilwell. (*b*) Comprises municipalities of Ballaarat and Sebastopol. (*c*) Comprises municipalities of Bendigo and Eaglehawk. (*d*) Exclusive of urban population in any contiguous shire. (*e*) Includes Fremantle and suburbs, 27,926.

8. **Provincial Urban Areas.**—In par. 5, page 707, the percentage of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Census is shown. In the following table, however, the aggregate population of all cities and towns, outside the metropolitan area of each State, with 2,000 or more and 3,000 or more inhabitants is shown, irrespective of whether such centres are incorporated separately or not. In addition, the percentage of the aggregate population of these cities and towns to the total population of the State is shown. These details are available so far only in respect of the 1933 Census. Similar particulars for the 1947 Census will be included in the next issue of the Year Book.

AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE: 1933 CENSUS.

(Excluding Full-blood Aboriginals.)

State or Territory.	Cities and Towns outside Metropolitan Area with Population of— 2,000 and over. Number.	Population.	Percentage of Population.	3,000 and over. Number.	Population.	Percentage of Population.
			%			%
New South Wales ..	106	567,094	21.80	69	474,150	18.23
Victoria	51	266,355	14.63	29	212,686	11.68
Queensland.. ..	33	233,154	24.61	19	199,496	21.05
South Australia ..	9	37,207	6.40	6	30,205	5.19
Western Australia ..	9	42,572	9.70	7	37,697	8.59
Tasmania	6	44,512	19.55	4	39,971	17.56
Australian Capital Territory.. ..	1	7,325	81.87	1	7,325	81.87
Total ..	215	1,198,219	18.07	135	1,001,530	15.16

9. **Principal Cities in the World.**—The following table shows the population of the world's largest cities at the latest available date. There is some doubt as to the comparability of the figures because of the abnormal conditions during and immediately following the war.

POPULATION OF THE WORLD'S LARGEST CITIES.

(Cities in the British Empire are printed in italics.)

Country.	City.	Year.	City Population ('000 omitted).	Country.	City.	Year.	City Population ('000 omitted).
England ..	*London (a)*	*1947*	*8,244*	Denmark ..	Copenhagen	1945	927
U.S.A. ..	New York..	1947	7,835	Czechoslovakia	Prague ..	1946	924
Japan ..	Tokyo (b) ..	1940	6,779	Belgium ..	Brussels ..	1945	912
Germany ..	Berlin ..	1939	4,332	Canada ..	*Toronto (e)*	*1941*	*900*
U.S.S.R. ..	Moscow ..	1939	4,137	U.S.A. ..	Cleveland ..	1940	878
China ..	Shanghai ..	1946	3,599	China ..	Mukden ..	1946	864
U.S.A. ..	Chicago ..	1940	3,397	U.S.A. ..	Baltimore	1940	859
Japan ..	Osaka ..	1940	3,252	U.S.S.R. ..	Kiev ..	1939	846
U.S.S.R. ..	Leningrad	1939	3,191	Turkey ..	Istanbul ..	1943	845
France ..	Paris ..	1946	2,725	U.S.S.R. ..	Kharkov ..	1939	833
Argentina ..	Buenos Aires	1945	2,485	Germany ..	Munich ..	1939	828
India ..	*Calcutta (c)*	*1941*	*2,109*	U.S.A. ..	St. Louis ..	1940	816
Egypt ..	Cairo ..	1947	2.100	U.S.S.R. ..	Baku ..	1939	809
U.S.A. ..	Philadelphia	1940	1,931	Netherlands	Amsterdam	1947	798
Brazil ..	Rio de Janiero	1938	1,849	China ..	Hankow ..	1931	778
China ..	Nanking ..	1946	1,755	India ..	*Madras* ..	*1941*	*777*
China ..	Tientsin ..	1946	1,718	U.S.A. ..	Boston ..	1940	771
China ..	Peiping ..	1946	1,688	Uruguay ..	Montevideo	1941	770
U.S.A. ..	Detroit ..	1940	1,623	Germany ..	Cologne ..	1939	768
Italy ..	Rome ..	1947	1,552	England ..	*Liverpool* ..	*1947*	*756*
U.S.A. ..	Los Angeles	1940	1,504	U.S.A. ..	Washington	1942	750
India ..	*Bombay* ..	*1941*	*1,490*	India ..	*Hyderabad*	*1941*	*739*
Australia ..	*Sydney* ..	*1947*	*1.484*	Italy ..	Turin ..	1946	710
Mexico ..	Mexico City	1940	1,448	Portugal ..	Lisbon ..	1940	709
Austria ..	Vienna ..	1946	1,407	Germany ..	Leipzig ..	1939	702
Germany ..	Hamburg ..	1946	1,384	Persia ..	Tehran ..	1942	699
Japan ..	Nagoya ..	1940	1,328	England ..	*Manchester*	*1947*	*690*
Brazil ..	Sao Paulo	1938	1,269	Sweden ..	Stockholm	1947	690
Italy ..	Milan ..	1946	1,264	Philippines	Manila ..	1941	685
Australia ..	*Melbourne*	*1947*	*1,227*	Thailand ..	Bangkok ..	1940	681
China ..	Canton ..	1936	1,223	U.S.A. ..	Pittsburgh	1940	672
Spain ..	Madrid ..	1947	1,187	India ..	*Lahore* ..	*1941*	*672*
Korea ..	Seoul ..	1946	1,142	Italy ..	Genoa ..	1946	650
Canada ..	*Montreal (d)*	*1941*	*1,140*	U.S.S.R. ..	Gorky ..	1939	644
Spain ..	Barcelona	1947	1,133	Hong Kong	*Hong Kong*	*1938*	*641*
Scotland ..	*Glasgow* ..	*1947*	*1,108*	Chile ..	Santiago ..	1940	640
Japan ..	Kyoto ..	1940	1,090	Netherlands	Rotterdam	1947	637
England ..	*Birmingham*	*1947*	*1,084*	France ..	Marseilles ..	1946	636
China ..	Chungking	1946	1,062	U.S.A. ..	San Francisco	1940	635
Hungary ..	Budapest ..	1946	1,027	China ..	Wenchow ..	1931	631
Rumania ..	Bucharest	1945	985	Germany ..	Dresden ..	1939	625
Italy ..	Naples ..	1946	968	Germany ..	Breslau ..	1939	615
Japan ..	Yokohama	1940	968	China ..	Changsha ..	1931	607
Japan ..	Kobe ..	1940	967	U.S.S.R. ..	Odessa ..	1939	604
Egypt ..	Alexandria	1937	928				

(a) Greater London. (b) Greater Tokyo. (c) Includes Howrah. (d) Greater Montreal. (e) Greater Toronto.

§ 4. Elements of Increase.

1. **Natural Increase.**—(i) *General.* The two factors which contribute to the growth of a population are the "natural increase," i.e., excess of births over deaths, and the "net migration," i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 are given for each sex and State (see No. 22, page 899). In the following table particulars for each sex are given in States for each quinquennium from 1901 to 1945 and for the ten years 1937–46. The natural increase for Australia from 1861 to 1946 inclusive was 5,039,314, consisting of 2,342,593 males and 2,696,721 females, and represented 79.06 per cent. of the total increase in population. During the present century the rate of natural increase grew until it reached the maximum rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. The figure rose to 7.99 per thousand in 1937 following small gains during each of the previous three years, fell slightly to 7.71 in 1939 but rose sharply during the war and in the post-war period, reaching the level of 13.62 in 1946.

In connexion with the two last-mentioned rates it should be particularly noted that from September 1939 "natural increase" has been regarded as excess of births over civilian deaths, i.e., no account has been taken of deaths of defence personnel.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS) 1901 to 1946.

(Excluding Full-blood Aboriginals.)

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust
Males.									
1901–05 ..	51,179	34,332	16,628	12,149	8,283	7,955	—223	(a)	130,303
1906–10 .	64,127	38,948	21,415	14,500	10,762	8,703	—264	(a)	158,191
1911–15 ..	77,070	46,160	27,497	18,673	12,730	9,386	—201	78	191,393
1916–20 ..	72,030	41,388	26,894	16,413	9,787	8,673	—125	75	175,135
1921–25 ..	80,860	49,254	28,941	16,721	10,284	8,543	— 68	37	194,572
1926–30 ..	72,430	43,756	25,645	14,583	11,245	7,001	—131	175	174,704
1931–35 ..	51,566	25,286	20,627	8,686	8,576	5,810	— 93	270	120,728
1936–40(*b*)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,450
1941–45(*b*)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,535
1937 ..	9,865	5,319	4,454	1,788	1,918	1,241	— 4	78	24,659
1938 ..	9,446	5,610	4,445	1,946	2,029	1,308	2	60	24,846
1939(*b*) ..	9,441	4,949	4,616	1,871	1,985	1,247	..	107	24,216
1940(*b*) ..	10,289	5,463	5,067	2,034	1,801	1,209	27	97	25,987
1941(*b*) ..	11,187	6,892	5,524	2,334	2,220	1,268	3	124	29,552
1942(*b*) ..	10,698	6,882	5,260	2,201	2,046	1,409	— 20	164	28,640
1943(*b*) ..	13,316	8,819	5,771	3,324	2,627	1,578	— 3	143	35,575
1944(*b*) ..	15,866	9,498	7,113	3,630	2,880	1,362	19	154	40,522
1945(*b*) ..	17,004	10,559	8,203	4,074	2,618	1,617	16	155	44,246
1946(*b*) ..	18,652	12,839	7,682	4,623	3,494	2,165	20	210	49,685

(*a*) Part of New South Wales prior to 1911. (*b*) Excess of births over civilian deaths as from September, 1939.

Note.—Minus sign (—) denotes excess of deaths over births.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
					FEMALES.				
1901–05..	59,163	39,831	22,910	12,701	11,468	8,027	28	(b)	154,128
1906–10..	71,297	42,629	26,048	14,754	13,354	8,522	33	(b)	176,637
1911–15..	87,074	50,258	33,463	19,318	16,262	9,604	62	78	216,119
1916–20..	81,799	42,886	32,273	16,825	13,185	8,821	135	72	195,996
1921–25..	89,438	49,685	34,289	17,595	13,839	8,837	127	82	213,892
1926–30..	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,313
1931–35..	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,521
1936–40(b)	60,628	28,464	28,991	10,057	13,626	6,574	220	437	148,997
1941–45(b)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,217
1937 ..	12,397	5,799	5,702	1,950	2,626	1,375	40	87	29,976
1938 ..	11,768	5,779	5,346	1,925	2,878	1,311	31	80	29,118
1939(b) ..	11,747	5,375	6,202	2,008	2,715	1,331	50	100	29,528
1940(b) ..	12,950	6,206	6,142	2,275	2,834	1,398	60	111	31,976
1941(b) ..	13,242	6,992	6,465	2,343	3,129	1,363	91	172	33,797
1942(b) ..	12,730	7,072	6,284	2,365	2,779	1,466	29	152	32,877
1943(b) ..	15,079	8,971	6,887	3,339	3,267	1,492	34	165	39,234
1944(b) ..	17,094	9,358	8,022	3,697	3,512	1,344	39	160	43,226
1945(b) ..	17,664	10,145	9,051	3,910	3,342	1,755	39	177	46,083
1946(b) ..	20,016	12,320	8,694	4,729	3,858	2,133	57	226	52,033
					PERSONS.				
1901–05..	110,342	74,163	39,538	24,850	19,751	15,982	—195	(a)	284,431
1906–10..	135,424	81,577	47,463	29,254	24,116	17,225	—231	(a)	334,828
1911–15..	164,144	96,418	60,960	37,991	28,992	18,990	—139	156	407,512
1916–20..	153,829	84,274	59,167	33,238	22,972	17,494	10	147	371,131
1921–25..	170,298	98,939	63,230	34,316	24,123	17,380	59	119	408,464
1926–30..	153,163	88,173	56,773	29,990	25,651	13,894	— 5	378	368,017
1931–35..	111,866	53,502	46,663	17,914	20,928	11,763	63	550	263,249
1936–40(b)	109,720	54,605	52,136	19,244	23,035	12,614	259	834	272,447
1941–45(b)	143,880	85,188	68,580	31,217	28,420	14,654	247	1,566	373,752
1937 ..	22,262	11,118	10,156	3,738	4,544	2,616	36	165	54,635
1938 ..	21,214	11,389	9,791	3,871	4,007	2,619	33	140	53,964
1939(b) ..	21,188	10,324	10,818	3,879	4,700	2,578	50	207	53,744
1940(b) ..	23,239	11,669	11,209	4,309	4,635	2,607	87	208	57,963
1941(b) ..	24,429	13,884	11,989	4,677	5,349	2,631	94	296	63,349
1942(b) ..	23,428	13,954	11,544	4,566	4,825	2,875	9	316	61,517
1943(b) ..	28,395	17,790	12,658	6,663	5,804	3,070	31	308	74,809
1944(b) ..	32,960	18,856	15,135	7,327	6,392	2,706	58	314	83,748
1945(b) ..	34,668	20,704	17,254	7,984	5,960	3,372	55	332	90,329
1946(b) ..	38,668	25,159	16,376	9,352	7,352	4,298	77	436	101,718

a) Part of New South Wales prior to 1911. (b) Excess of births over civilian deaths as from tember, 1939.

NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
Rate of Natural Increase(*a*)—Persons.									
1901–05..	15.59	12.31	15.34	13.92	18.07	17.85	— 8.8	(*b*)	14.60
1906–10..	17.25	13.11	16.99	15.44	18.52	18.37	—12.6	(*b*)	15.93
1911–15..	18.27	13.91	18.61	17.55	18.76	19.63	— 7.6	13.71	17.05
1916–20..	15.69	11.65	16.74	14.51	14.56	17.46	0.43	12.23	14.57
1921–25..	15.47	12.32	15.87	13.28	13.69	16.14	3.13	6.84	14.34
1926–30..	12.51	10.10	12.84	10.58	12.63	12.85	—0.22	9.60	11.72
1931–35 ..	8.61	5.88	9.88	6.17	9.55	10.33	2.54	12.00	7.95
1936–40(*c*)	8.06	5.84	10.40	6.49	9.95	10.66	8.10	14.00	7.89
1941–45(*c*)	10.05	8.62	13.02	10.14	11.85	12.02	4.84	21.86	10.30
1937 ..	8.26	6.00	10.25	6.34	9.93	11.16	6.57	15.14	7.99
1938 ..	7.79	6.11	9.77	6.53	10.58	11.08	5.68	12.14	7.82
1939(*c*) ..	7.70	5.49	10.66	6.50	10.00	10.79	7.82	16.55	7.71
1940(*c*) ..	8.36	6.14	10.92	7.19	9.79	10.81	10.41	15.10	8.23
1941(*c*) ..	8.72	7.19	11.57	7.78	11.28	10.94	9.15	20.24	8.91
1942(*c*) ..	8.27	7.12	11.15	7.50	10.12	11.92	1.01	22.22	8.57
1943(*c*) ..	9.94	9.01	12.09	10.86	12.36	12.64	3.24	22.58	10.34
1944(*c*) ..	11.42	9.47	14.26	11.83	13.27	11.02	5.56	22.12	11.46
1945(*c*) ..	11.88	10.32	16.03	12.73	12.22	13.56	5.24	22.12	12.22
1946(*c*) ..	13.13	12.42	15.02	14.72	14.92	17.04	7.29	27.45	13.62

(*a*) Excess of births over deaths per 1,000 mean population. (*b*) Part of New South Wales prior to 1911. (*c*) Excess of births over civilian deaths per 1,000 mean population as from September 1939.

Note.—Minus sign (—) denotes excess of deaths over births.

The table above shows the decline which has taken place in the rate of natural increase in all States of Australia since the beginning of the century. The decline is evident notwithstanding the stepping-up of the rate occasioned by increased births since the commencement of the 1939–45 War and the overstatement due to the omission of deaths of defence personnel. During the first five years of the present century the average increment to the population of Australia by this means was 56,886 persons per annum. The increment rose to a maximum of 81,693 persons per annum in 1921–25, but thereafter fell to 52,650 persons per annum in the quinquennium 1931–35, increasing during 1936–40 to 54,489. During 1941–45 the average excess of births over civilian deaths was 74,750, which rose in 1946 to a record high level of 101,718.

(ii) *Comparison with other Countries.* Notwithstanding its low birth-rate, Australia has a higher rate of natural increase than most European countries, owing to the fact that its death-rate is very low. The following table gives a comparison between the rates of natural increase in 1946 for the several States of Australia and for the Dominion of New Zealand, with those of some of the principal countries for which such information is available. Corresponding annual rates for the period 1909–13 have also been appended. Comparisons with the earlier period show how general has been the fall in the rate of natural increase.

NATURAL INCREASE OF POPULATION: VARIOUS COUNTRIES.

INCREASE PER ANNUM PER 1,000 MEAN POPULATION.

State or Country.	1909–13.	1946.
Australasia—		
Tasmania (*a*)	18.8	17.0
New Zealand (*b*)	17.1	15.5
Queensland (*a*)	17.9	15.0
Western Australia (*a*)	18.1	14.9
South Australia (*a*)	16.8	14.7
Australia (*a*)	16.7	13.6
New South Wales (*a*)	18.0	13.1
Victoria (*a*)	13.6	12.4
Europe—		
Netherlands	15.1	21.7
Norway	12.4	13.3
Denmark	13.9	13.2
Italy	12.8	10.6
Northern Ireland	6.3	10.1
Sweden	10.4	9.1
Eire	6.3	8.9
Switzerland	9.3	8.7
Spain	9.3	8.5
Europe—*continued.*		
Germany	12.8	(*c*) 8.0
England and Wales	10.7	7.6
France	0.8	7.3
Scotland	10.7	7.2
Belgium	7.8	4.8
Asia—		
Japan	13.1	7.7
Africa—		
Union of South Africa (whites only)	(*d*)	18.2
America—		
Canada	(*d*)	17.5
United States	(*d*)	13.3

(*a*) Excludes full-blood aboriginals. (*b*) Excludes Maoris. (*c*) Rate for year 1943 based on frontiers of 1937. (*d*) Not available.

2. **Net Migration.***—The other factor of increase in the population, namely, the excess of arrivals over departures, known as "net migration," is, from its nature, much more subject to variations than is the factor of "natural increase".

Particulars of the increase by net migration are given below for quinquennial periods from 1901 to 1945 and annually for the ten years 1937–46. Disturbances in the migration records were caused by interstate troop movements, which prevented accurate count of civilians travelling interstate. Interstate passenger traffic has, for this reason, been excluded from migration records since 30th June, 1943. The figures included in the table below from 1933 onwards have been adjusted to agree with the population estimates revised in accordance with the preliminary results of the Census of 30th June, 1947.

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* The subject of migration is dealt with at some length later in this chapter.

POPULATION : INCREASE BY NET MIGRATION, 1901 TO 1946.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
MALES.									
1901–05..	15,671	−37,971	495	−11,031	28,127	−1,771	−697	(a)	−7,177
1906–10..	11,157	9,400	12,291	10,590	711	−5,784	−366	(a)	37,999
1911–15..	38,483	1,568	13,037	−4,263	189	−9,599	1,050	−90	40,375
1916–20..	23,150	18,205	3,614	7,920	−3,782	−67	−551	30	48,519
1921–25..	35,660	37,760	18,834	14,244	15,375	−5,630	17	1,199	117,459
1926–30..	37,524	7,849	11,584	−2,230	19,069	−3,668	870	2,259	73,257
1931–35..	−1,646	−5,951	6,195	−3,654	−4,215	−1,384	−24	3	−10,676
1936–40(b)	7,574	11,913	5,249	−4,988	−2,501	−793	2,787	1,632	20,873
1941–45bc	6,614	17,502	−6,487	2,202	−9,261	−4,312	889	−1,822	5,325
1937 ..	3,147	−1,958	1,061	−984	675	795	49	177	2,962
1938 ..	2,011	1,617	1,137	−8	233	−79	182	611	5,704
1939 (b)..	2,771	883	2,175	−258	−480	−534	1,292	379	6,228
1940 (b)..	−1,458	12,577	−354	−3,347	−2,728	−794	1,164	238	5,298
1941 (b)..	−1,848	12,381	−3,883	1,839	−4,317	−2,715	906	−565	1,798
1942 (b)..	10,505	3,030	−6,780	699	−1,636	−848	−1,185	−549	3,236
1943 (b)(c)	−1,903	2,913	3,671	−392	−2,892	−748	1,168	−708	1,109
1944 (b)(c)	−579	−237	−100	20	−38	−1	..	..	−935
1945 (b)(c)	439	−585	605	36	−378	..	..	..	117
1946 (b)(c)	−2,680	−783	−1,443	−2	−321	−58	−12	..	−5,299
FEMALES.									
1901–05..	1,500	−21,984	−2,390	−8,448	22,293	−720	81	(a)	−9,616
1906–10..	9,390	10	7,780	4,403	1,867	−4,023	−148	(a)	19,279
1911–15..	48,612	25,051	12,054	5,389	10,650	−5,658	271	118	96,487
1916–20..	21,294	985	2,776	3,863	−4,530	−2,211	47	−34	22,190
1921–25..	24,660	19,443	12,154	7,482	6,706	−5,138	−244	744	65,807
1926–30..	33,326	12,532	3,537	−341	9,363	−4,293	278	2,048	56,450
1931–35..	1,093	2,943	1,125	−2,284	−578	−2,644	88	47	−210
1936–40(b)	14,163	9,233	1,500	−2,608	32	−1,872	715	1,083	22,255
1941–45bc	3,648	10,745	−4,759	786	−3,654	−3,701	357	−938	2,484
1937 ..	3,593	−1,266	110	−865	335	251	−36	119	2,241
1938 ..	1,732	1,267	−239	45	210	−123	76	465	3,433
1939 (b)..	5,128	1,389	1,334	−267	695	−1,029	200	213	7,663
1940 (b)..	2,560	8,172	281	−1,334	−972	−1,178	414	159	8,102
1941 (b)..	617	7,114	−889	1,082	−2,261	−1,802	−237	−238	3,386
1942 (b)..	5,121	3,131	−3,969	261	523	−1,523	−312	−302	2,930
1943 (b)(c)	−978	1,432	1,532	−577	−1,383	−372	906	−398	162
1944 (b)(c)	−204	−204	−729	−38	−69	−4	..	..	−1,248
1945 (b)(c)	−908	−728	−704	58	−464	..	..	..	−2,746
1946 (b)(c)	−6,586	803	−3,149	−10	−844	−77	14	..	−9,849

(a) Part of New South Wales prior to 1911. (b) Excludes troop movements as from September, 1939. (c) Excludes interstate migration as from 1st July, 1943.

NOTE.—Minus sign (−) indicates excess of departures over arrivals.

POPULATION: INCREASE BY NET MIGRATION—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
					PERSONS.				
1901–05..	17,237	−59,955	−1,903	−19,479	50,420	−2,497	−616	(*a*)	−16,793
1906–10..	20,547	9,410	20,071	14,993	2,578	−9,807	−514	(*a*)	57,278
1911–15..	87,095	26,619	25,091	1,126	10,839	−15,257	1,321	28	136,862
1916–20..	44,444	19,190	6,390	11,783	−8,312	−2,278	−504	−4	70,709
1921–25..	60,320	57,203	30,988	21.726	22,081	−10,768	−227	1,943	183,266
1926–30..	70,850	20,381	15,121	−2.571	28,432	−7,961	1,148	4,307	129,707
1931–35..	−553	−3,008	7,320	−5,938	−4,793	−4,028	64	50	−10,886
1936–40(*b*)	21,737	21,146	6,758	−7,506	−2,469	−2,665	3,506	2.715	43,128
1941–45*bc*	10,262	28,247	−11,246	2,988	−12,915	−8,013	1,246	−2,760	7,809
1937 ..	6,740	−3,224	1,171	−1,849	1,010	1,046	13	296	5,203
1938 ..	3,743	2,884	898	37	443	−202	258	1,076	9,137
1939 (*b*)..	7,899	2,272	3,509	−525	215	−1,563	1,492	592	13,891
1940 (*b*)..	1,102	20,749	−73	−4,681	−3,700	−1,972	1,578	397	13,400
1941 (*b*)..	−1,231	19,495	−4,772	2,921	−6,578	−4,517	669	−803	5,184
1942 (*b*) .	15,626	6,161	−10,740	960	−1,113	−2,371	−1,497	−851	6,166
1943 (*b*)(*c*)	−2,881	4,345	5.203	−960	−4,275	−1,120	2,074	−1,106	1,271
1944 (*b*)(*c*)	−783	−441	−829	−18	−107	−5	..	..	−2.183
1945 (*b*)(*c*)	−469	−1,313	−99	94	−842	..	..	..	−2,629
1946 (*b*)(*c*)	−9,266	20	−4,592	−12	−1,165	−135	2	..	−15,148

(*a*) Part of New South Wales prior to 1911. (*b*) Excludes troop movements as from September, 1939. (*c*) Excludes interstate migration as from 1st July, 1943.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

There was a loss of population by migration in the first five years of the present century; in the next five quinquennial periods there were varying gains which averaged about 115,000 per quinquennium.

In the five years ended 1935 there was a net emigration of 10,886 and in the five years ended 1940 the net immigration was 43,128, which during the war period 1941–45 fell to 7,809 persons. A large net loss by migration of 15,148 persons in 1946 was due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen.

3. **Total Increase.**—The total increase of the population is obtained by the combination of the natural increase with the net migration, and, in the case of the years 1939 to 1946, with deaths of defence personnel.

The total increment to the population from the beginning of 1861 to the end of 1946 was 6,373,661 while that from 1901–46 was 3,753,907. The annual results for the last ten years are shown below, together with quinquennial figures from 1901 to 1945.

POPULATION : TOTAL INCREASE, 1901 to 1946.

MALES.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901–05..	66,850	—3,639	17,123	1,118	36,410	6,184	—920	(*a*)	123,126
1906–10..	75,284	48,348	33,706	25,090	11,473	2,919	—630	(*a*)	196,190
1911–15..	115,553	47,728	40,534	14,410	12,919	—213	849	—12	231,768
1916–20..	95,180	59,593	30,508	24,333	6,005	8,606	—676	105	223,654
1921–25..	116,520	87,014	47,775	30,965	25,659	2,913	—51	1,236	312,031
1926–30..	109,954	51,605	37,229	12,353	30,314	3,333	739	2,434	247,961
1931–35..	50,438	18,311	26,756	5,050	5,896	4,635	—105	501	111,482
1936–40(*b*)	57,839	36,240	28,295	4,212	10,038	5,556	2,846	2,616	147,642
1941–45*bc*	62,418	48,360	20,302	14,874	2,939	2,163	909	432	152,397
1937 ..	13,250	3,014	5,520	820	3,237	2,106	49	347	28,343
1938 ..	11,938	7,066	5,575	1,952	2,908	1,297	189	423	31,348
1939 (*b*)..	12,376	5,436	6,766	1,610	2,137	776	1,295	812	31,208
1940 (*b*)..	8,898	17,507	4,642	—1,337	—343	457	1,195	661	31,680
1941 (*b*)..	8,109	17,580	1,134	3,745	—1,923	—1,511	911	—124	27,921
1942 (*b*)	17,262	6,334	—3,041	1,931	10	276	—1,206	—93	21,473
1943 (*b*)(*c*)	8,452	8,997	8,035	2,199	—394	616	1,163	—272	28,796
1944 (*b*)(*c*)	13,414	7,439	6,150	3,234	2,933	1,224	21	462	34,877
1945 (*b*)(*c*)	15,181	8,010	8,024	3,765	2,313	1,558	20	459	39,330
1946 (*b*)(*c*)	16,058	11,657	6,157	4,659	3,752	2,180	12	537	45,012

FEMALES.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901–05..	60,729	17,847	20,512	4,253	33,761	7,301	109	(*a*)	144,512
1906–10..	80,687	42,639	33,828	19,157	15,221	4,499	—115	(*a*)	195,916
1911–15..	135,686	75,309	45,517	24,707	26,912	3,946	333	196	312,606
1916–20..	103,093	43,871	35,049	20,688	8,655	6,610	182	38	218,186
1921–25..	114,098	69,128	46,443	25,077	20,545	3,699	—117	826	279,699
1926–30..	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	249,763
1931–35..	61,447	30,659	27,738	7,238	12,147	3,503	277	540	143,549
1936–40(*b*)	75,278	36,998	31,711	8,062	14,463	5,053	995	1,780	174,340
1941–45*bc*	79,663	52,410	33,220	17,109	13,163	4,074	654	844	201,137
1937 ..	16,044	4,363	6,058	1,206	3,120	1,699	17	292	32,799
1938 ..	13,780	7,045	5,339	2,092	3,250	1,258	119	255	33,138
1939 (*b*)..	16,919	6,590	7,783	1,861	3,574	371	262	502	37,862
1940 (*b*)..	15,591	14,213	6,667	1,065	2,028	291	486	460	40.801
1941 (*b*)..	13,896	13,917	5,836	3,548	1,029	—370	—132	126	37,850
1942 (*b*)..	17,856	10,014	2,551	2,743	3,470	14	—270	42	36,420
1943 (*b*)(*c*)	14,133	10,234	8,675	2,901	2,036	1,192	953	—42	40,082
1944 (*b*)(*c*)	16,954	8,992	7,547	3,801	3,602	1,407	52	350	42,705
1945 (*b*)(*c*)	16,824	9,253	8,611	4,116	3,026	1,831	51	368	44,080
1946 (*b*)(*c*)	13,438	13,041	5,768	4,881	3,169	2,138	84	417	42,936

(*a*) Part of New South Wales prior to 1911. (*b*) Includes recorded deaths of defence personnel as from September, 1939. *See* letterpress page 702. (*c*) Excludes interstate migration as from 1st July, 1943.

NOTE.—Minus sign (—) denotes decrease.

POPULATION : TOTAL INCREASE, 1901 to 1946—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap Terr.	Australia
PERSONS.									
1901–05..	127,579	14,208	37,635	5,371	70,171	13,485	− 811	(*a*)	267,638
1906–10..	155,971	90,987	67,534	44,247	26,694	7,418	− 745	(*a*)	392,106
1911–15..	251,239	123,037	86,051	39,117	39,831	3,733	1,182	184	544,374
1916–20..	198,273	103,464	65,557	45,021	14,660	15,216	− 494	143	441,840
1921–25..	230,618	156,142	94,218	56,042	46,204	6,612	− 168	2,062	591,730
1926–30..	224,013	108,554	71,894	27,419	54,083	5,933	1,143	4,685	497,724
1931–35..	111,885	48,970	54,494	12,288	18,043	8,138	172	1,041	255,031
1936–40(*b*)	133,117	73,238	60,006	12,274	24,501	10,609	3,841	4,396	321,982
1941–45*bc*	142,081	100,770	53,522	31,983	16,102	6,237	1,563	1,276	353,534
1937 ..	29,294	7,377	11,578	2,026	6,357	3,805	66	639	61,142
1938 ..	25,718	14,111	10,914	4,044	6,158	2,555	308	678	64,486
1939 (*b*)..	29,295	12,026	14,549	3,471	5,711	1,147	1,557	1,314	69,070
1940 (*b*)..	24,489	31,720	11,309	− 272	1,685	748	1,681	1,121	72,481
1941 (*b*)..	22,005	31,497	6,970	7,293	− 894	− 1,881	779	2	65,771
1942 (*b*)..	35,118	16,348	− 490	4,674	3,480	290	− 1,476	− 51	57,893
1943 (*b*)(*c*)	22,585	19,231	16,710	5,100	1,642	1,808	2,116	− 314	68,878
1944 (*b*)(*c*)	30,368	16,431	13,697	7,035	6,535	2,631	73	812	77,582
1945 (*b*)(*c*)	32,005	17,263	16,635	7,881	5,339	3,389	71	827	83,410
1946 (*b*)(*c*)	29,496	24,698	11,925	9,540	6,921	4,318	96	954	87,948

(*a*) Part of New South Wales prior to 1911. (*b*) Includes recorded deaths of defence personnel as from September, 1939. *See* letterpress page 702. (*c*) Excludes interstate migration as from 1st July, 1943.

NOTE.—Minus sign (−) denotes decrease.

Differences between the figures above and totals of figures for natural increase and net migration shown in preceding tables, represent, after taking into account deaths of defence personnel, unrecorded movement of population from 1st July, 1933, to 31st December, 1946, as disclosed by the preliminary results of the 1947 Census. Particulars of total increase have been adjusted for this discrepancy but no separate adjustment has been applied to individual elements of increase. Intercensal discrepancies disclosed by previous Censuses were adjusted on recorded oversea departures.

4. **Percentage Rates of Increase.**—(i) *Australia.* The annual percentage rates of increase of population in Australia during each of the years 1940 to 1946 were as follows :—1940, 1.04 ; 1941, 0.93 ; 1942, 0.81 ; 1943, 0.96 ; 1944, 1.07 ; 1945, 1.14 ; 1946, 1.18. These rates are based on the preliminary results of the 1947 Census. Rates based on final Census results will be found in the Appendix.

(ii) *Various Countries.* The table hereunder gives approximate percentage rates of increase of the population of Australia and its component States, in comparison with those for other countries :—

POPULATION : PERCENTAGE RATES OF INCREASE IN VARIOUS COUNTRIES.

State or Country.	Annual Percentage Rate of Increase of Population during period—							
	1901–06.	1906–11.	1911–16.	1916–21.	1921–26.	1926–31.	1931–36.	1936–41.
AUSTRALASIA—	%	%	%	%	%	%	%	%
Australia ..	1.38	2.04	1.87	2.07	2.11	1.50	0.78*a*	0.96*a*
New South Wales*b*	1.99	2.05	2.61	2.19	2.20	1.74	0.90*a*	0.98*a*
Victoria ..	0.17	1.70	1.38	1.68	2.00	1.18	0.51*a*	1.02*a*
Queensland ..	1.35	2.77	2.18	2.17	2.38	1.53	1.12*a*	1.10*a*
South Australia(*c*)	0.27	2.48	1.47	2.33	2.17	0.81	0.45*a*	0.69*a*
Western Australia	6.22	2.42	1.77	1.31	2.66	2.56	0.93*a*	0.82*a*
Tasmania ..	1.33	0.63	0.43	1.90	0.04	1.01	0.63*a*	0.53*a*
New Zealand ..	2.81	2.43	1.56	2.13	2.06	1.38	0.79	0.58*d*
EUROPE—								
England and Wales ..	1.04	1.02	−0.84	1.81	0.64	0.44	0.42	0.44
Scotland ..	0.55	0.56	0.31	0.24	0.09	−0.21	0.50	0.64
Eire	−0.22	−0.06	−0.21	0.58	−0.60	−0.12	0.28	0.18
Belgium ..	1.26	0.69	0.53	−0.55	1.03	0.71	0.42	−0.10
Denmark ..	1.12	1.26	1.20	2.13	1.01	0.67	0.84	0.74
France.. ..	0.15	0.06	−0.72	0.55	0.76	0.53	0.02	−1.48
Germany ..	1.46	1.33	0.71	−1.60	0.37	0.55	0.58	(*e*)
Italy	0.52	0.80	1.16	0.22	0.91	0.31	0.63	0.55*f*
Netherlands ..	1.53	1.22	1.72	1.16	1.53	1.06	1.26	1.12
Norway ..	0.51	0.73	1.10	1.14	0.65	0.42	0.46	0.52
Spain	0.52	0.87	0.66	0.82	0.65	0.89	1.46	0.91
Sweden ..	0.61	0.84	0.70	0.64	0.40	0.29	0.34	0.45
Switzerland ..	1.28	1.17	0.81	0.01	0.38	0.62	0.44	0.43
ASIA—								
Ceylon ..	1.62	1.20	1.71	1.28	2.30	1.18	1.34	1.40
Japan	1.29	1.08	1.42	0.37	1.42	1.48	0.77	1.06
AMERICA—								
Canada ..	2.99	2.99	2.20	1.81	1.33	1.97	1.23	0.85
United States ..	2.00	1.82	1.67	1.21	1.67	1.27	0.69	0.79

(*a*) Revised in accordance with the preliminary results of the 1947 Census. (*b*) Includes Australian Capital Territory. (*c*) Includes Northern Territory. (*d*) Excludes armed forces overseas at 31st December, 1941. (*e*) Not available. (*f*) Excludes war losses.

NOTE.—Minus sign (−) denotes decrease.

(iii) *Variations in the Rates.* The annual rate of increase of the population during the present century has averaged 1.51 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900, to 31st December, 1945 has been arranged into certain defined groups of years according to the occurrence of influences seriously affecting the growth of population :—

POPULATION : PERIODICAL PERCENTAGE RATES OF INCREASE.

Period from 31st December—	Interval.	Increase during Period.	Average Annual Increase.	Average Annual Percentage Rate of Increase.		
				Natural Increase.	Net Migration.	Total.
	Years.	Million.	Thousand.	%	%	%
1900 to 1913 ..	13	1.13	87	1.59	0.53	2.04
1913 to 1923 ..	10	0.86	86	1.50	0.15	1.64
1923 to 1929 ..	6	0.68	113	1.27	0.64	1.88
1929 to 1939 (*a*)..	10	0.57	57	0.82	0.03	0.85
1939 to 1945 (*a*)..	6	0.43	71	0.92	0.05	0.97

(*a*) Revised in accordance with the preliminary results of the Census of 30th June, 1947. The figures include Australian defence forces overseas as from September, 1939.

Up to 1913 the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914–18 War was a dominating influence in the decade 1914–23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. In the next span 1924–29 a more settled and prosperous era was experienced; migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth-rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression, and immigration ceased—in fact Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the rate of growth of the population receded to 0.85 per cent. per annum. With the outbreak of war in 1939, Australia entered a new phase in her demographic history the full effects of which will not be seen for some time to come. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each year from 1940 to 1945 and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible.

If the population increased at the average rate of the present century, namely, 1.51 per cent. per annum, it would double itself in 46 years. It has been estimated, on the assumptions that the 1932–34 birth and death rates remain unchanged and that no increment to the population results from migration, that the average annual rates of natural increase would be for the period, 1933–53, 0.64 per cent.; 1933–63, 0.55 per cent. and 1933–73, 0.46 per cent. In this respect the experience in Australia would be very similar to that of many other countries as the result of the low birth-rate.

Rates of increase from 1860 to 1946 may be found for each State and Territory of Australia in *Demography Bulletin*, No. 64, 1946.

§ 5. Density.

1. **General.**—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a population on 31st December, 1946, of approximately 7,519,246 excluding about 47,000 full-blood aboriginals, has a density of only 2.53 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents the densities are approximately as follows:—Europe, 122; Asia, 73; Africa, 14; North and Central America, 21; and South America, 13. The population of Australia has thus about one-fifth of the density of South America and of Africa; about one-eighth of that of North and Central America; about one-thirtieth of that of Asia; and about one-fiftieth of that of Europe.

On account of the enormous area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole the figure has increased from 1.29 per square mile in 1901 to 2.53 in 1946. Victoria's density, however, has grown from 13.77 to 23.22 and that of New South Wales from 4.43 to 9.58 in the same period.

A map showing the density of population throughout Australia at the 1933 Census appears on page 712 of this chapter. When comparing the density of population of the several States consideration should be given to the average annual rainfall distribution in each State as an indication of the climatic influence upon probable population numbers. The area of New South Wales receiving less than 10 inches of rainfall is 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; Tasmania, nil; and Australia, 38 per cent.

Particulars concerning the number and density of the population of the most important countries of the world at 31st December, 1939, are given in the following table. These figures have been taken from the *Statistical Year Book of the League of Nations*, 1942–44. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

POPULATION OF THE WORLD : NUMBER AND DENSITY, 1939.

Country.	Population. ('000 omitted).	Density. (a)
EUROPE.		
U.S.S.R. (European) ..	134,400	58.0
Germany (b)	79,700	354.2
United Kingdom ..	47,778	508.3
Italy (c)	44,928	343.0
France	41,950	196.9
Poland	35,090	233.9
Spain (incl. Canary Is.) ..	25,600	131.3
Rumania	20,045	175.1
Yugoslavia	15,703	163.6
Hungary	10,840	240.9
Netherlands	8,834	679.5
Belgium	8,396	699.7
Portugal	7,620	217.7
Greece	7,200	144.0
Sweden	6,341	36.7
Bulgaria	6,308	157.7
Switzerland	4,206	262.9
Denmark	3,825	225.0
Finland	3,684	24.9
Eire	2,946	109.1
Norway	2,937	23.5
Other..	18,619	..
Total Europe ..	536,950	121.8
ASIA.		
China and Dependencies..	450,000	105.0
British India and Indian States	382,000	241.6
Japan and Dependencies	104,120	397.4
Netherlands Indies (d) ..	69,435	94.5
U.S.S.R. (Asiatic) ..	36,000	6.1
French Indo-China ..	23,700	82.9
Philippine Islands ..	16,300	143.0
Burma	16,600	70.9
Turkey (e)	16,240	56.6
Iran	15,000	23.6
Thailand	15,600	78.0
Afghanistan	7,000	27.9
Arabia	7,000	7.0
Ceylon	5,922	236.9
Nepal	5,600	103.7
Other..	19,483	..
Total Asia ..	1,190,000	73.4

Country.	Population. ('000 omitted).	Density. (a)
AFRICA.		
Nigeria and Protectorate (f)	20,642	55.3
Egypt	16,050	43.1
French West Africa ..	14,800	8.1
Belgian Congo ..	10,356	11.5
Union of South Africa ..	10,251	21.7
Algeria	7,600	8.9
French Morocco ..	6,000	42.9
Anglo-Egyptian Sudan ..	6,500	6.7
Abyssinia	5,500	15.9
Other..	50,001	..
Total Africa ..	157,900	13.5
NORTH AND CENTRAL AMERICA.		
United States of America	131,416	43.4
Mexico	19,380	25.5
Canada	11,368	3.1
Cuba	4,253	96.7
Other..	17,891	..
Total North and Central America	184,308	21.3
SOUTH AMERICA.		
Brazil	40,900	12.4
Argentina	13,132	12.2
Columbia	8,986	20.4
Peru	7,000	14.5
Chile	4,940	17.2
Other..	13,722	..
Total South America..	88,680	12.8
OCEANIA, ETC.		
Australia (g)	7,049	2.4
New Zealand and Dependencies	1,660	16.0
Territory of New Guinea	670	7.4
Hawaii	421	60.1
Papua	300	3.3
Fiji	215	30.7
Other..	485	..
Total Oceania, etc. ..	10,800	3.3
SUMMARY.		
Europe	536,950	121.8
Asia	1,190,000	73.4
Africa	157,900	13.5
America, North and Central	184,308	21.3
America, South ..	88,680	12.8
Oceania, etc.	10,800	3.3
Total	2,168,638	42.3

(a) Number of persons per square mile. (b) Includes Austria and Sudeten Territory. (c) Includes Albania. (d) Includes Dutch New Guinea. (e) Excludes European Territory—1,330,000. (f) Includes British Cameroons. (g) Subsequently revised in accordance with the preliminary results of the 1947 Census, to 7,057,000. Includes 52,000 full-blood aboriginals.

2. **Position of the British Empire.**—The approximate relationship of the British Empire to the world as a whole in regard to its area and population is given hereunder :

AREA AND POPULATION : BRITISH EMPIRE AND WORLD.(a)

Particulars.	The World.	British Empire.
Area in square miles (excluding Polar Circles) ..	51,235,000	12,502,127
Population	2,168,638,000	560,095,000
Population per square mile	42.33	44.80

(a) *Statistical Year Book of the League of Nations*, 1942–44, and *The Stateman's Year Book*, 1945

§ 6. General Characteristics.

1. **Sex Distribution.**—(i) *States.* The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. On pp. 163–5 in the second issue of the Official Year Book a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the 1914–18 War there has been a continuous diminution of the masculinity of the population. In 1900, the masculinity was 110.55; in 1910, 107.87 and in 1920, 103.47. After 1921, however, the masculinity tended to rise until 1927 (104.54), since when it has gradually fallen to 100.46 in 1946.

A reduction in the masculinity of a population may be expected where persons in the higher age-groups constitute an increasing proportion of the total population. This is a direct consequence of the greater longevity of females. A falling birth-rate tends to reduce masculinity while a rising birth-rate tends to increase it.

The following table shows the masculinity of the population at quinquennial intervals from 1901 to 1940 and for each year from 1941 onwards :—

POPULATION : MASCULINITY, 1901 to 1946.

(Number of Males per 100 Females.)

As at 31st December—	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901	110.12	101.16	125.78	102.71	155.69	107.90	593.32	(*a*)	110.15
1905	111.05	97.60	121.75	101.65	141.35	106.09	496.76	(*a*)	108.65
1910	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(*a*)	107.87
1915	105.66	95.07	114.74	98.26	117.23	99.77	400.33	109.75	103.55
1920	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1925	104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.24
1930	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1935 (*b*) ..	102.40	97.84	109.81	100.20	113.22	102.47	212.79	115.60	102.72
1940 (*b*) ..	101.01	97.93	108.49	98.91	110.41	102.78	240.42	124.45	101.82
1941 (*b*) ..	100.58	98.25	107.45	98.99	109.05	101.84	289.46	120.08	101.52
1942 (*b*) ..	100.54	97.89	106.30	98.74	107.41	102.06	270.47	117.87	101.09
1943 (*b*) ..	100.14	97.79	106.07	98.52	106.30	101.56	226.10	114.41	100.77
1944 (*b*) ..	99.90	97.66	105.71	98.36	105.92	101.39	223.12	115.32	100.54
1945 (*b*) ..	99.78	97.56	105.51	98.27	105.55	101.15	220.27	115.80	100.41
1946 (*b*) ..	99.96	97.45	105.52	98.23	105.71	101.17	215.14	116.52	100.46

(*a*) Part of New South Wales prior to 1911. (*b*) Revised in accordance with the preliminary results of the 1947 Census.

(ii) *Various Countries.* The difference between young and old countries in the masculinity of their population is clearly illustrated by the comparisons furnished in the following table. For countries which were belligerents at the outset of the 1939–45 War the latest available figures up to 1939 are given and for other countries figures for 1939 or the nearest year thereto. There is some doubt as to the comparability of figures for subsequent years.

POPULATION : MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males to each 100 Females.	Country.	Year.	Number of Males to each 100 Females.
Canada	1938	106.5	Norway	1939	96.3
Eire	1936	105.0	Spain	1940	95.9
Union of South Africa(*a*)	1939	102.8	Germany	1939	95.8
New Zealand(*b*) ..	1939	102.3	Hungary	1939	95.7
Australia(*c*)	**1939**	**102.1**	Poland	1938	95.3
United States of America	1940	100.7	U.S.S.R. (Russia) ..	1939	94.8
Japan	1939	100.4	Northern Ireland ..	1939	94.7
Netherlands ..	1939	99.6	Italy	1936	94.3
Sweden	1939	98.2	France	1939	93.0
Belgium	1938	98.0	Scotland	1938	92.9
Denmark	1939	97.4	England and Wales	1938	92.4

(*a*) White population only. (*b*) Excludes Maoris. (*c*) Excludes full-blood aboriginals.

2. **Age ; Conjugal Condition ; Birthplace ; Nationality ; Race ; Religion : Industry ; and other General Characteristics.**—Particulars of the general characteristics of the population as published in paragraphs 2 to 14 of the previous issue of this publication are obtained only at a Census. The latest available information, recorded at the Census of 30th June, 1947, will be found in the Appendix.

§ 7. Dwellings.

Most of the questions on the Census Schedule related to the individual members of the household, but other important questions referred to the dwellings in which the people were living at the date of the Census. From the replies to these questions much valuable information was obtained concerning housing conditions. Detailed tables summarizing the information obtained at the 1933 Census concerning class of dwelling, number of rooms, nature of occupancy, and rentals may be found on pages 493–9 of Official Year Book No. 36. Similar particulars for the 1947 Census are not yet available. The two tables following, however, summarize the preliminary information relating to dwellings in Urban and Rural Divisions and in each State and Territory at the Census of 30th June, 1947.

For Census purposes a " dwelling " is defined as a collection of rooms occupied by a household group living together as a family unit, whether comprising the whole or only part of a house or other building (including temporary structures). The Census definition of a dwelling includes private houses, tenements, flats, hotels, boarding-houses, hospitals, other institutions and any other structure used for the purpose of human habitation, but excludes dwellings occupied solely by full-blood aboriginals, and wagons, vans, etc., in which persons were camping out on the night of the Census. Where two or more separate buildings in one place are used by a single family for dwelling purposes, the whole is regarded as one dwelling. On the other hand, where a building is subdivided into tenements or flats which are occupied as separate units, each unit is counted as a dwelling. A flat has been defined as a self-contained dwelling unit which can be completely closed off and which includes both cooking and bathing facilities.

Since the 1933 Census, the number of dwellings in Australia occupied, unoccupied and being built increased by 377,236 or 23.31 per cent., a much higher rate of increase than that of 14.3 per cent. for the population during the same period. At the previous Census there was one private dwelling occupied for every 4.4 persons in Australia but at 30th June, 1947, this ratio had increased to one dwelling for every 4.0 persons.

DWELLINGS : AUSTRALIA, 1947 CENSUS.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

(Preliminary figures—Subject to revision.)

Division.	Occupied.	Unoccupied. (a)	Being Built. (b)	Total.	Percentage of Total Dwellings.
Urban—					%
Metropolitan	985,931	7,397	17,871	1,011,199	50.67
Provincial	332,861	7,363	6,679	346,903	17.38
Rural	595,145	32,281	10,208	637,634	31.95
Total	1,913,937	47,041	34,758	1,995,736	100.00

(a) Including "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. (b) Relates substantially to unoccupied dwellings of all types being built at 30th June, 1947, and is not identical with the number of houses under construction at the time of the Census.

Details for each State and Territory are as follows :—

DWELLINGS : STATES, 1947 CENSUS.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

(Preliminary figures—Subject to revision.)

State or Territory.	Occupied.	Unoccupied. (a)	Being Built. (b)	Total.
New South Wales	747,666	17,392	12,981	778,039
Victoria	530,579	11,412	11,328	553,319
Queensland	272,843	9,647	4,175	286,665
South Australia	168,852	3,547	2,794	175,193
Western Australia	125,060	2,606	1,535	129,201
Tasmania	62,612	2,351	1,607	66,570
Northern Territory	2,705	34	22	2,761
Australian Capital Territory ..	3,620	52	316	3,988
Total	1,913,937	47,041	34,758	1,995,736

(a) Including "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. (b) Relates substantially to unoccupied dwellings of all types being built at 30th June, 1947, and is not identical with the number of houses under construction at the time of the Census.

§ 8. Oversea Migration.

1. **Oversea Migration during Present Century.**—Earlier issues of the Official Year Book contain in summary form tables showing the increase of population by net migration from 1861 to the latest date, while the Demography Bulletins issued by this Bureau give this information for the individual years. On pp. 721–2 of this chapter will be found a summary showing, in quinquennial groups from 1901 to 1945 and in single years from 1937 to 1946, the increase by net migration to the population of the States. The following table shows for Australia the arrivals and departures and the net migration since 1901 :—

OVERSEA MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.			Net Migration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901–05..	196,993	84,167	281,160	204,170	93,783	297,953	− 7,177	− 9,616	− 16,793
1906–10..	251,482	119,552	371,034	213,483	100,273	313,756	37,999	19,279	57,278
1911–15(*a*)	422,927	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916–20(*a*)	438,721	100,764	539,485	390,202	78,574	468,776	48,519	22,190	70,709
1921–25..	289,695	188,357	478,052	172,236	122,550	294,786	117,459	65,807	183,266
1926–30..	266,593	203,887	470,480	193,336	147,437	340,773	73,257	56,450	129,707
1931–35..	124,207	115,116	239,323	134,883	115,326	250,209	−10,676	− 210	− 10,886
1936–40(*b*)	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,255	43,128
1941–45(*b*)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1937 ..	35,123	34,679	69,802	32,161	32,438	64,599	2,962	2,241	5,203
1938 ..	39,910	38,018	77,928	34,206	34,585	68,791	5,704	3,433	9,137
1939(*b*) ..	37,719	37,366	75,085	31,491	29,703	61,194	6,228	7,663	13,891
1940(*b*) ..	19,296	19,307	38,603	13,998	11,205	25,203	5,298	8,102	13,400
1941(*b*) ..	11,861	10,800	22,661	10,063	7,414	17,477	1,798	3,386	5,184
1942(*b*) ..	6,295	5,971	12,266	3,059	3,041	6,100	3,236	2,930	6,166
1943(*b*) ..	3,931	2,194	6,125	2,822	2,032	4,854	1,109	162	1,271
1944(*b*) ..	4,454	3,043	7,497	5,389	4,291	9,680	− 935	− 1,248	− 2,183
1945(*b*) ..	8,881	6,495	15,376	8,764	9,241	18,005	117	− 2,746	− 2,629
1946(*b*) ..	17,782	17,108	34,890	23,081	26,957	50,038	− 5,299	− 9,849	− 15,148

(*a*) Includes movements of defence personnel. (*b*) Excludes movements of defence personnel as from September, 1939.

NOTE.—Minus sign (−) indicates excess of departures over arrivals.

Net migration has varied greatly during the foregoing periods, reaching a maximum in the five years 1921–25. The 1914–18 War, during which 331,781 members of the Australian Imperial Forces embarked for service overseas, was responsible for a very large increase in the departures during the years 1914–18. Immigration increased rapidly from 1910 to 1912, the gain during the latter year being the greatest in any one year in the present century (with the exception of 1919, when the troops were returning to Australia).

Owing to the depressed economic conditions in Australia the gain by migration decreased rapidly during 1928 and 1929 and there were actual losses of population during the next three years. There was little variation in the figures for arrivals and departures from 1933 to 1936, but in 1938 the arrivals exceeded the departures by 9,137 and in 1939 the excess was 13,891, the greatest gain to the population by migration since 1928. The excess of arrivals over departures in 1940 was 13,400, but with the outbreak of War in the Pacific area, the figure fell to 5,184 for 1941, 6,166 for 1942, 1,271 for 1943 and in 1944, 1945 and 1946 there were net losses by migration of 2,183, 2,629 and 15,148 persons respectively.

The influence of the Commonwealth immigration policy is clearly reflected in the figures above. The average annual number of nominated and selected immigrants who arrived in Australia during the periods specified was as follows :—

IMMIGRATION : NUMBER OF NOMINATED AND SELECTED PERSONS.

Period.	Average Annual Number.	Year.	Recorded Number.
1901–05	Not available	1933	72
1906–10	7,945	1934	159
1911–15	30,111	1935	100
1916–20	2,326	1936	9
1921–25	23,090	1937	141
1926–30	19,881	1938	852
1931–35	156	1939	2,686
1936–40	766	1940	140
		Total to end of 1940	1,068,311

The number of nominated and selected immigrants reached its peak in 1926, when 31,260 arrivals were recorded. Assisted migration was discontinued for the duration of the war. For information on post-war policy see § 9 (A) following.

2. **Country of Embarkation and Disembarkation.**—The countries from which the migrants arrived or to which they departed are shown for 1945 and 1946 in Demography Bulletin Nos. 63 and 64 respectively. Annual averages for the period 1925–29 appear in Official Year Book No. 25.

3. **Racial Origin.**—The majority of migrants to and from Australia are of British race, while only a small proportion are of non-European race.

During the period 1926–30 there was such a considerable influx of Italian, Greek and Yugoslav settlers, that, despite considerable concurrent emigration they provided a large permanent addition to the population of Australia. In the following quinquennium 1931–35, there was a considerably reduced increment to the Italian population by migration whilst there was actually an excess of departures of most other races. The five years 1936–40, however, saw a resumption of immigration of Southern Europeans, while refugees were responsible for the heavy increase in net immigration of German nationals. The net movement of non-Europeans is generally small, although with the influx of considerable numbers of evacuees of non-European race a marked excess of arrivals over departures was recorded during the war period. In 1946, the first post-war year, many of these war-time evacuees were repatriated. The numbers of arrivals and departures and the net gain or loss by migration during the five years 1936–40 and the years 1945 and 1946 classified according to racial origin are shown in the following table :—

RACIAL ORIGIN OF ARRIVALS AND DEPARTURES : AUSTRALIA.

Racial Origin.	Arrivals.			Departures.			Net Migration.		
	1936–40.	1945.	1946.	1936–40.	1945.	1946.	1936–40.	1945.	1946.
American (U.S.)	10,668	674	1,857	10,188	754	3,363	480	− 80	− 1,506
British (*a*) ..	254,951	12,319	27,789	240,196	16,010	37,295	14,755	− 3,691	− 9,506
French ..	2.597	343	586	2,595	352	600	2	− 9	− 14
German (*b*) ..	9,676	47	595	2,316	46	318	7,360	+ 1	+ 277
Greek.. ..	4,400	9	218	921	11	47	3.479	− 2	+ 171
Italian ..	10,519	15	27	2,869	44	137	7,650	− 29	− 110
Yugoslav ..	2,588	5	93	988	3	53	1,600	+ 2	+ 40
Other European	12,184	1,551	2,429	5,277	471	6.450	6,907	+ 1,080	− 4,021
Total European	307,583	14,963	33.594	265.350	17,601	48,263	42,233	− 2,728	− 14,669
Chinese ..	7,802	149	452	7,633	50	768	169	+ 99	− 316
Indian and Cingalese ..	2,385	145	511	2.258	94	547	127	+ 51	− 36
Japanese ..	1,712	1	3	1,739	..	13	− 27	+ 1	− 10
Other Non-European ..	1,830	118	330	1,204	170	447	626	− 52	− 117
Total Non-European ..	13,729	413	1,296	12,834	314	1,775	895	+ 99	− 479
Total ..	321,312	15,376	34,890	278,184	18,005	50,038	43,128	− 2,629	− 15,148

(*a*) Includes Maltese and Cypriote. (*b*) Includes Austrian.

NOTE.—Minus sign (−) indicates an excess of departures over arrivals.

Although the title of this table has been changed, the term " Racial Origin " being substituted for " Nationality or Race ", there has been no variation in the method of compilation. The particulars shown are directly comparable with tables previously published under the heading of " Nationality or Race ". The figures should not, however, be regarded as a completely accurate record of " Racial Origin " as they are based on the passenger's own statement as to race, which in many cases may incorrectly express the country of his nationality or birthplace rather than actual race. So far as available information permits, however, migrants are classified according to race. This applies particularly in cases where a person's nationality differs from race through naturalization or marriage.

Over 81 per cent. of the net migration in 1926–30 consisted of persons of British nationality and the remaining 19 per cent. were other Europeans. In the quinquennium, 1931–35, there was a loss by migration of persons of British nationality and a gain of those of Italian nationality. Non-Europeans, with the exception of Indians and Cingalese, also showed an excess of departures. During 1936–40 migrants of all nationalities except Japanese showed a gain. In 1944, 1945 and 1946 the net losses were due in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries.

4. **Classes of Arrivals and Departures.**—Since 1st July, 1924, the arrivals and departures have been classified according to the declared intention of the migrant in regard to residence. The figures for the five-year periods 1931–35, 1936-40 and 1941–45, and for the years 1945 and 1946 are as follows :—

MIGRANTS CLASSIFIED ACCORDING TO INTENDED RESIDENCE : AUSTRALIA.

Classification.	1931–35.	1936–40.	1941–45.	1945.	1946.
Permanent new arrivals ..	54,444	88,712	32,624	7,512	18,217
Australian residents returning from abroad ..	84,554	104,870	11,150	3,760	6,330
Temporary visitors ..	100,325	127,730	20,151	4,104	10,343
Total Arrivals ..	239,323	321,312	63,925	15,376	34,890
Australian residents departing permanently ..	71,670	51,006	22,399	10,785	29,806
Australian residents departing temporarily ..	79,426	94,650	9,163	2,788	6,702
Temporary visitors ..	99,108	132,528	24,554	4,432	13,530
Not Stated	5	..	..	..	..
Total Departures ..	250,209	278,184	56,116	18,005	50,038

NOTE.—The figures for permanent new arrivals include evacuees arriving in Australia during the war years as follows :—1940 : 1,404 males, 3,139 females ; 1941 : 600 males, 1,670 females ; 1942 : 4,033 males, 4,105 females ; 1943 : 1,167 males, 591 females ; 1944 : 23 males, 28 females ; 1945 : 216 males, 153 females.

Although permanent new arrivals increased during each of the eight years prior to 1939 the number in the latter year was considerably below the annual average for the quinquennium 1926–1930 while the war caused a large drop in the number from 1940. Permanent departures were far more numerous in the years 1928 to 1931 than in earlier years but they declined during each of the six years ended 1937, the number in the latter year being the lowest recorded until the outbreak of war in 1939. Up to and including 1929 there was a considerable gain of permanent residents, but during 1930 and 1931 there was a heavy loss. The loss was very much reduced in 1932, 1933 and 1934, whilst during the five years up to and including 1939 there was a net gain in permanent residents of more than 28,000.

In the table above "permanent" residence means residence of a year or more, travellers being classified under this definition according to information supplied by them at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification, and the figures quoted in the table must therefore be accepted as a record of intention only.

§ 9. Immigration.

(A) Assisted Migration into Australia.

1. **Joint Commonwealth and States' Scheme.**—In 1920 an arrangement was arrived at between the Commonwealth and State Governments whereby the Commonwealth Government became responsible for the selection and medical inspection of British migrants from the United Kingdom, and for their transport to Australia. The State Governments advised the Commonwealth from time to time as to the numbers and classes of migrants they were prepared to receive, and became responsible for their subsequent settlement. In addition, personal and group nominations were accepted by the States, the nominators undertaking responsibility for their settlement and aftercare.

In 1930 owing to the financial and industrial depression it was decided to confine the grant of assisted passages to the wives and dependent children of men who arrived in Australia prior to 1st January, 1930.

On 4th March, 1938, the Commonwealth Government decided, in co-operation with the Government of the United Kingdom, to resume assisted migration, and provision was made for the grant of assisted passages from the United Kingdom in favour of—

- (*a*) persons (relatives and friends) resident in the United Kingdom nominated by individuals or approved organizations;
- (*b*) migrants specially requisitioned for by any State; and
- (*c*) persons of British stock resident in the United Kingdom, who would be in possession of—
    - (1) in the case of a married man, not less than £300 capital on arrival in Australia, or alternatively, a pension or other income of not less than £100 per annum;
    - (2) in the case of a single man not less than £50 capital on arrival.

It was also decided that the Commonwealth Government would co-operate with any State to the extent that the migration policy of that State coincided with the policy of the Commonwealth, provided that the Commonwealth would itself deal with nominations which did not fall within the ambit of the policy of any particular State, but which were acceptable under the Commonwealth policy.

2. **Number of Persons Assisted.**—The number of British assisted migrants for the years 1931 to 1940 inclusive, and the total from the earliest years up to the end of 1940 (when immigration ceased) are given in the following table :—

IMMIGRATION : NUMBER OF PERSONS ASSISTED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust	W. Aust.	Tas.	A.C.T.	Total.
1931	76	45	43	6	99	5	1	275
1932	21	3	23	..	123	5	..	175
1933	11	3	1	1	56	..	..	72
1934	11	4	1	..	143	..	..	159
1935	1	..	1	..	98	..	..	100
1936	4	2	1	..	2	..	..	9
1937	60	33	6	3	39	..	..	141
1938	410	179	19	43	161	38	2	852
1939	1,309	544	376	126	304	24	3	2,686
1940	92	20	16	4	5	3	..	140
Total from earliest years to end of 1940.. ..	347,705	256,090	236,413	115,994	87,015	25,022	72	1,068,311

3. **Suspension of Assisted Passage Scheme during War.**—After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war. Resumption of assisted migration was the subject of recent negotiations between the Commonwealth and United Kingdom Governments.

4. **Free and Assisted Passage Agreement, March, 1945.**—(i) *General.* An agreement was signed in March, 1945, between the Commonwealth and British Governments for free and assisted passages for British residents desirous of migrating to Australia. As from the opening date, 31st March, 1947, the Commonwealth Government will undertake to accept eligible persons provided they are medically fit and otherwise regarded as suitable for settlement. Information concerning conditions and opportunities for employment will be provided by the Australian High Commissioner for the guidance of all prospective settlers. Expenses incurred in the selection of applicants will be borne by the Commonwealth Government, which has also undertaken to provide free transportation from the port of disembarkation to the ultimate destination in Australia, and accommodation for a limited period wherever necessary. In this connexion, the Commonwealth has undertaken to make adequate administrative arrangements with the States in regard to the reception, placement and aftercare of all migrants upon arrival, and to secure the co-operation of approved voluntary organizations.

Substantial rights, including health, medical services, sickness and unemployment benefits, maternity allowances and child endowment under the Australian Social Security Services Scheme will be extended to settlers as from the date of arrival; but it has not been possible to extend employment preference to British ex-servicemen and women. Intended settlers will not, however, be granted a passage unless there is a reasonable assurance that they will obtain employment on arrival.

Persons already established in Australia may nominate for assisted passages friends or relatives resident in the United Kingdom who are eligible for consideration.

It is intended that the scheme will remain operative only so long as favourable conditions for settlement are known to exist.

(ii) *Free Passages.* This part of the scheme will be financed by the United Kingdom as part of its re-settlement programme. Persons eligible for consideration are British ex-servicemen and women, wherever demobilized (together with their dependents) if they were resident in the British Isles or were in the United Kingdom Forces overseas on 1st September, 1938, and have served in a full-time capacity in the Armed Forces or Merchant Navy of the United Kingdom during any period after 25th May, 1939.

(iii) *Assisted Passages.* Assisted passages will be granted under the Empire Settlement Acts of the United Kingdom to suitable British subjects normally resident in the United Kingdom and who do not come within the scope of (ii) above. However, the Commonwealth normally will not be prepared to accept single persons or married persons without children if they are over 45 years of age. Married persons, if they are accompanied by one or more children, may be accepted irrespective of age, and in the case of parents who are joining children already established in Australia, no age limit is imposed. Each settler, male or female, of 19 years of age and over will be required to contribute £10 (English currency) toward the cost of a passage, and each juvenile of 14 but not more than 18, £5 (English currency). Children under 14 years of age will travel free. The cost of the latter and the remainder of the cost of the others will be borne equally by the two Governments. A migrant not remaining in Australia for a minimum of two years will be liable for repayment of the amount of free grant.

(B) The Regulation of Immigration into Australia.

1. **Powers and Legislation of the Commonwealth.**—(i) *Constitutional.* Under Section 51, xxvii. and xxviii. of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.

(ii) *Legislation.* A summary of the provisions of the Immigration Act 1901–1925 and the Contract Immigrants Act 1905 (except the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which will be found in Official Year Book No. 21, p. 927), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding issues of the Official Year Book (see No. 12, pp. 1166–8).

The Immigration Act 1930.—Under this Act it is provided that Section 5, sub-section (1) of the Immigration Act 1901–1925 applies to any person, who, since the commencement of the Immigration Restriction Act 1901, evaded an officer when entering Australia, or gained admission or re-admission by fraudulent means. Steps can be taken to deal with such persons as prohibited immigrants at any time after they have landed in Australia.

The Immigration Act 1932.—This Act provides (*a*) that any alien who fails to satisfy an officer that he holds a landing permit, or that his admission has been authorized, may be prohibited from landing; (*b*) for the increase from three to five years of the period during which a person may be declared a prohibited immigrant; (*c*) that a person not a British subject and who has been convicted of a crime of violence against the person may be deported pursuant to an order of the Minister without his being subjected to a dictation test; (*d*) for the deportation of a person who has been convicted of a criminal offence or who has become an inmate of an insane asylum or public charitable institution within five years from the date of arrival instead of three years as hitherto; and (*e*) that where the wife of a person whom it is proposed to deport so desires, her name and the names of her dependent children may be included in her husband's deportation order. This would of course apply only to wives and children who were themselves immigrants.

The Immigration Act 1933.—This Act provides that Section 8A, as amended by the Immigration Act 1932—see (*d*) above—shall apply to persons who arrived in Australia since the commencement of the Section, i.e., since 2nd December, 1920. It also makes statutory provision for the taking of securities for compliance with the provisions of the Act.

The Immigration Act 1935.—The main purpose of this Act was to add a penalty clause to Section 5 of the principal Act, to overcome a legal difficulty which had arisen in regard to relying on Section 7 for the imposition of penalties on persons convicted under Section 5 on charges of being prohibited immigrants offending against the Act.

The Immigration Act 1940.—This Act provides (*a*) that the holder of a landing permit shall on demand satisfy an officer that he is able to comply with the conditions specified in the permit; (*b*) for the issue of, and extensions of, certificates of exemption; (*c*) that a non-British person who is convicted of a crime of violence against the person or of extorting any money or thing by force or threat, or of any attempt to commit such a crime or who is convicted of any other criminal offence for which he is sentenced to imprisonment for one year or longer may be deported; (*d*) for the exercise of discretion by the Minister in enforcing an order for the deportation of a person; and (*e*) for the provision and enforcement of maintenance guarantees in relation to persons seeking to enter Australia.

2. **Conditions of Immigration into Australia.**—(i) *Immigration of Non-European or Coloured Persons.* In pursuance of the established policy, the general practice is not to permit Asiatics or other coloured immigrants to enter Australia for the purpose of settling permanently.

Special arrangements were made with India, Japan and China under which facilities were afforded for subjects of those countries who were bona fide merchants, students, or tourists to enter and remain in Australia under exemption whilst they retained their status. Following on the outbreak of war, however, the entry of Asiatics other than the temporary admission of some refugees from Far Eastern countries and the Pacific Islands was suspended.

(ii) *Immigration of White Aliens.* Aliens seeking to enter Australia for permanent residence are required to obtain landing permits or special authority for admission from the Department of Immigration.

Following the outbreak of war, alien immigration into Australia was severely restricted and the admission of aliens from European countries was virtually suspended.

An interim immigration policy now in force provides for the admission of the following classes whose maintenance and accommodation have been guaranteed by persons resident in Australia :—(*a*) friendly aliens ; (*b*) displaced and persecuted persons of ex-enemy nationality : and (*c*) the wives and unmarried children of ex-enemy nationals whose husbands or fathers are resident in the Commonwealth.

Ex-enemy nationals other than the wives and minor children of persons resident here are not eligible for admission.

It is intended to revise this policy as soon as circumstances permit.

A report has been made on the availability of European migrants by the committee representing the Commonwealth Parliament and employers' and employees' organizations which visited Europe in 1945 to attend the International Labour Office Conference, and was commissioned to act as an Australian Immigration Advisory Committee.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following officers :—

(*a*) In Australia: The Secretary, Department of Immigration, Canberra, A.C.T., (*b*) In Great Britain : the Official Secretary, High Commissioner's Office, Australia House, Strand, London, (*c*) in other British Dominions : the High Commissioner for Australia, (*d*) in other countries where Australia is represented : the Secretary, Australian Legation.

For details of the Dominions and countries included see the section entitled "Diplomatic and other Representatives Overseas and in Australia " in Chapter XXVIII.

3. **Persons Admitted Without Dictation Test.**—The following table shows the number and nationalty of persons admitted during 1945 and 1946 without passing the dictation test. Persons who are permitted to land pending transhipment to another country are excluded.

PERSONS ADMITTED WITHOUT DICTATION TEST : NATIONALITIES, AUSTRALIA, 1945 AND 1946.

Nationality or Race.	1945.	1946.	Nationality or Race.	1945.	1946.
Albanian	..	..	Swiss	34	42
American, United States	674	1,857	Turkish	1	3
American Negro ..	17	4	Yugoslav	5	93
Belgian	12	30	Other Whites ..	34	510
British	12,314	27,641			
Bulgarian	..	..	ASIATIC—		
Czechoslovak ..	9	72	Chinese	506	325
Danish	25	73	Indian and Cingalese ..	1,674	633
Dutch	1,257	1,379	Indonesian ..	(*a*)1,072	(*a*) 73
Estonian	2	19	Japanese	..	..
Finnish	2	5	Javanese	(*b*)	(*b*)
French	343	586	Koepanger	..	..
German	47	296	Malay	103	41
Greek	9	218	Palestinian ..	..	..
Hungarian	5	68	Syrian	..	..
Italian	15	27	Timorese	9	..
Latvian	1	13	OTHER—		
Lithuanian	1	7			
Norwegian	32	59	Pacific and South Sea Islanders ..	17	51
Polish	42	346			
Portuguese	1	23	Papuan and New Guinea Natives ..	25	68
Rumanian	7	24	Other and Unspecified	115	331
Russian	69	175			
Spanish	6	8			
Swedish	16	23	Total	18,501	35,123

(*a*) Includes Javanese. (*b*) Included with Indonesian.

4. **Departures of Persons of Non-European Races.**—The following figures in common with the other statistics in this sub-section have been compiled by the Department of Immigration and exclude transhipments. They are not therefore in agreement with departures. compiled in this Bureau and published elsewhere, which include transhipments. The number of persons of non-European race who left Australia during 1945 and 1946 were 8,142 and 7,319 respectively, distributed among the various nationalities as follows (1945 figures shown in parenthesis) :—American Negroes, nil (28); Chinese 1,495 (2,029); Indonesians including Javanese, 806 (2,210); Indians and Cingalese, 4,459 (3,455); Malays 80 (113); Pacific Islanders, nil (20); Papuans and New Guinea Natives, 63 (73); Timorese, nil (9); other coloured 416 (205).

(C) Passports.

Provision is made in the Immigration Act 1901–1940 for the production of a passport by each person over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938, which repealed the compulsory provisions and is now simply a machinery measure governing the issue of passports and the grant of other passport facilities. The Act extends to the Territories of Australia, including Papua, Norfok Island and the Mandated Territory of New Guinea.

Although not compulsory under the 1938 Act to be in possession of a passport when leaving Australia, it is very desirable in their own interests that Australians proceeding abroad should provide themselves with a passport as a means of establishing their identity and nationality. The possession of a passport is necessary for admission into most countries overseas, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1; for an ordinary visa 8s. and for a transit visa, 2s.

§ 10. Naturalization.

1. **Commonwealth Legislation.**—Naturalization in Australia is governed by the Nationality Act 1920–1946. The qualifications necessary for naturalization are :—(*a*) Residence in Australia continuously for not less than one year immediately preceding application for naturalization and previous residence either in Australia or in some other part of His Majesty's dominions for a period of four years within the last eight years before the application; (*b*) good character and an adequate knowledge of the English language; and (*c*) intention to settle in the British Empire.

The amending Act of 1930 provided for the charge of a prescribed fee for a certificate of naturalization. The fee is £5, except in the case of a certificate granted to a woman who was a British subject prior to her marriage to an alien, in which case the amount is 5s. An applicant who served with a good record in the Commonwealth Naval or Military Forces during the 1914–18 War or in the Defence Forces in the 1939–45 War, or the widow of a person who so served is exempt from the payment of any fee. In the case of indigent persons the Minister may reduce the fee payable for a certificate of naturalization to 10s.

The amending Act of 1936 provided for certain alterations in the law dealing with the national status of married women, and vested in the Minister for the Interior certain powers and functions hitherto exercised by the Governor-General. These are now vested in the Minister for Immigration.

The amending Act, which came into operation on 1st April, 1937, provided for the following exceptions to the general principle that the wife of a British subject shall be deemed to be a British subject, and the wife of an alien deemed to be an alien :—

(*a*) a woman who was a British subject prior to her marriage to an alien does not cease to be a British subject unless by reason of her marriage she acquires her husband's nationality;

(*b*) if a man, during the continuance of his marriage, ceases to be a British subject, his wife does not lose her British nationality unless she acquires her husband's new nationality;

(*c*) if a man, during the continuance of his marriage, ceases to be a British subject and his wife acquires his new nationality she may, within one year from the date on which she acquired her husband's new nationality, or within such further time as the Minister in special circumstances allows, make a declaration that she desires to retain her British nationality;

(*d*) if after 31st March, 1937, a certificate of naturalization is granted to an alien, his wife, if she is not already a British subject, shall not be deemed to be a British subject, unless, within one year from the date of such certificate, or within such further time as the Minister in special circumstances allows, she makes a declaration that she desires to acquire British nationality;

(*e*) where an alien is a subject of a State at war with His Majesty, his wife, if she was a natural-born British subject, may, upon making a declaration that she desires to resume British nationality, be granted a certificate of naturalization.

Provision was also made in the amending Act whereby a woman who was a British subject prior to her marriage and who acquired her husband's nationality may make a declaration that she desires to retain, while in Australia or in a Territory to which the Act applies, the rights, powers and privileges of a British subject.

Two amending Acts, Nos. 9 and 28, were passed in 1946.

No. 9 provided that, notwithstanding any other provisions of the Act, a woman who, at the time of her marriage to an alien, was resident in Australia, and was a British subject, shall while in Australia continue to be a British subject.

No. 28 provided that the Act should extend to the Territory of New Guinea, thus enabling aliens resident in that Territory to apply for naturalization.

A summary of the main provisions of the principal Act appears in Official Year Book No. 22, pp. 934-5.

2. **Certificates Granted.**—(i) *Australia.* Particulars regarding the previous nationalities of the recipients of certificates of naturalization issued under the Act during the years 1945 and 1946, and the countries from which such recipients had come, are given in the following table :—

NATURALIZATION ; CERTIFICATES GRANTED, 1945 and 1946.

Previous Nationalities of Recipients.

Nationality.	Certificates Granted.		Nationality.	Certificates Granted.	
	1945.	1946.		1945.	1946.
Albanian	62	136	Japanese	3	1
American, United States ..	18	32	Jugoslav	94	164
Argentinian	..	4	Latvian	11	18
Armenian	..	3	Lebanese	13	45
Belgian	2	5	Lithuanian	7	5
British by local naturalization	2	6	Luxemberger	2	..
Bulgarian	21	66	Norwegian	17	33
Chilean	..	1	Palestinian	10	32
Chinese	1	1	Panamanian	..	1
Czechoslovak	47	130	Peruvian	1	1
Danish	15	37	Polish	253	332
Danziger	..	7	Portuguese	1	..
Dutch	8	22	Roumanian	39	28
Egyptian	..	2	Russian	..	48
Estonian	14	50	Spanish	10	16
Finnish	38	73	Stateless	1,481	999
French	7	12	Swedish	15	25
German	180	445	Swiss	10	26
Greek	241	701	Syrian	6	8
Hungarian	162	124	Turkish	1	4
Iranian	..	1	Uraguayan	..	1
Iraqi	..	1			
Italian	1,097	3,467	Total	3,889	7,113

NATURALIZATION : CERTIFICATES GRANTED, 1945 and 1946—*continued.*

Countries from which Recipients of Commonwealth Certificates had come.

Country.	Certificates Granted. 1945.	Certificates Granted. 1946.	Country.	Certificates Granted. 1945.	Certificates Granted. 1946.
Albania	57	134	Luxemburg	1	..
Argentine	2	8	Madagascar	..	1
Austria	269	150	Malaya	4	69
Belgium	18	27	Manchuria	9	22
Brazil	2	2	Netherlands East Indies ..	9	11
British Honduras ..	..	1	New Caledonia	2	6
Bulgaria	17	55	New Guinea	3	11
Burma	..	1	New Zealand	8	15
Canada	19	6	Norway	14	30
Ceylon	7	3	Palestine	9	37
Chile	4	2	Panama	3	1
China	52	93	Persia	..	1
Cuba	10	3	Peru	1	1
Czechoslovakia	27	57	Philippine Islands ..	4	2
Danzig	8	4	Poland	154	253
Denmark	11	26	Portugal	2	..
Egypt	61	63	Roumania	23	30
England	590	550	Russia	6	23
Estonia	9	41	Samoa	1	1
Finland	26	40	South Africa	8	14
France	143	68	South America	9	10
Germany	441	498	Spain	9	14
Greece	222	729	Straits Settlements ..	20	9
Haiti	1	..	Sweden	9	18
Holland..	113	43	Switzerland	58	50
Hong Kong	6	2	Syria	7	..
Hungary	160	103	Tahiti	..	2
India	8	5	Turkey	3	2
Iran	2	..	United States of America	29	42
Ireland	1	..	West Africa	..	1
Italy	1,062	3,523	Australia (person born in Australia who had acquired foreign nationality by marriage or naturalization)	16	..
Japan	4	7			
Jugoslavia	93	136			
Latvia	6	14			
Lebanon	10	39			
Lithuania	7	4	Total	3,889	7,113

(ii) *States.* The certificates of naturalization granted in 1946 (1945 figures in parenthesis) were issued in the various States and Territories as follows :—New South Wales, 2,193 (1,706) ; Victoria, 2,548 (1,135) ; Queensland, 884 (389) ; South Australia, 585 (212) ; Western Australia, 846 (403) ; Tasmania, 24 (14) ; Northern Territory, 28 (19) ; and Australian Capital Territory, 5 (11) ; Total, 7,113 (3,889).

§ 11. Population of Territories.

At the Census of 30th June, 1947, arrangements were made to obtain complete information concerning not only the two internal territories of Australia—Northern Territory and Australian Capital Territory—but also the external Territories under the control of Australia, namely :—Norfolk Island ; Papua ; Trust Territory of New Guinea, and Nauru (Trusteeship)

The preliminary figures respecting population and number of dwellings in each Territory at the Census of 1947 are summarized in the following table :—

POPULATION AND DWELLINGS : TERRITORIES, 30th JUNE, 1947.

EXCLUDING INDIGENOUS POPULATION.

Territory.	Population.			Dwellings.			
	Males.	Females.	Persons.	Occupied.	Unoccupied.	Being Built.	Total.
Northern Territory ..	7,378	3,490	10,868	2,705	34	22	2,761
Australian Capital Territory	9,092	7,813	16,905	3,620	52	316	3,988
Norfolk Island	505	433	938	279	43	5	327
Papua (*a*)	2,057	1,182	3,239	769	(*b*)	(*b*)	(*b*)
Trust Territory of New Guinea (*a*)	4,369	1,831	6,200	1,391	(*b*)	(*b*)	(*b*)
Nauru (Trusteeship) ..	1,413	63	1,476	54	9	10	73

(*a*) Includes temporary dwellings constructed of iron, sisalcraft, native materials, canvas, etc. in war-devastated areas. (*b*) Not available.

Particulars concerning the indigenous populations of these Territories are included in Chapter X. " The Territories of Australia ".

§ 12. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951–61, a brief account is given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914–16 of Official Year Book No. 22, particulars are shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appears on pp. 687–96 of Official Year Book No. 23.

The aboriginals are scattered over the whole of the mainland, but the majority are concentrated in Western Australia, Queensland and the Northern Territory. At a Census of aboriginals taken on 30th June, 1944, in all States except New South Wales, the following particulars were disclosed :—

ABORIGINAL CENSUS, 30th JUNE, 1944.

State or Territory.	Full-blood.					Half-caste.					Total Full-blood and Half-caste
	Nomadic.	In Employment.	In Supervised Camps. (*a*)	Other.	Total.	Nomadic.	In Employment.	In Supervised Camps. (*a*)	Other.	Total.	
New South Wales *b*	40	112	314	128	594	505	2,057	3,403	4,057	10,022	10,616
Victoria ..	6	14	6	3	29	80	230	150	465	925	954
Queensland (*c*) ..	931	3,144	2,782	1,122	7,979	84	2,083	1,487	1,892	5,546	13,525
South Australia	1,399	484	667	318	2,868	493	409	970	336	2,208	5,076
Western Australia	14,553	4,966	2,118	573	22,210	276	2,872	1,001	733	4,882	27,092
Tasmania ..	..	2	..	..	2	..	124	..	251	375	377
Northern Territory	4,735	2,965	5,631	..	13,331	..	349	226	247	822	14,153
Australian Capital Territory ..	..	..	1	..	1	..	26	75	..	101	102
Australia ..	21,664	11,687	11,519	2,144	47,014	1,438	8,150	7,312	7,981	24,881	71,895

(*a*) This figure does not include those living in supervised camps who were in regular employment. (*b*) At 30th June, 1941. (*c*) Excludes Torres Strait Islanders (1,064 in regular employment, 2,754 in supervised camps, and 82 other).

CHAPTER XVII.

VITAL STATISTICS.

[NOTE.—1. In the Vital Statistics chapter of Official Year Book No. 35 tables covering a single year related to 1941. In the last issue these tables covered 1944 and, where possible, 1942 and 1943. In the present issue these tables cover 1946 and, where possible, 1945. In some cases, however, space does not permit of the inclusion of figures for 1945. These figures will be found in *Demography Bulletin*, No. 63 unless otherwise specifically indicated.

2. Figures for Australia throughout are exclusive of full-blood aboriginals.]

§ 1. Marriages.

1. **Number, 1946.**—The number of marriages registered in Australia during the year ended 31st December, 1946, was 79.496, giving a rate of 10.64 per 1,000 of the mean population for the year. In 1942 both the number and the rate were the highest on record. A summary of the number of marriages registered in each State and Territory since 1861 is given in the following table :—

MARRIAGES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	3,384	4,447	738	1,245	153	668	..	..	10.635
1866–1870	3,654	4,580	930	1,287	164	629	..	..	11,244
1871–1875	4,242	4,874	1,255	1,494	167	658	..	..	12,690
1876–1880	5,181	5,083	1,493	2,137	196	817	..	..	14,907
1881–1885	7,148	6,718	2,326	2,476	223	1,000	..	..	19,891
1886–1890	7,730	8,567	3,054	2,067	299	959	..	..	22,676
1891–1895	7,985	7,543	2,705	2,142	466	905	..	..	21,746
1896–1900	9,094	7,852	3,102	2,190	1,572	1,098	..	..	24,908
1901–1905	10,435	8,294	3,154	2,412	2,024	1,342	(*a*) 7	..	27,668
1906–1910	12,742	9,502	4,203	3,159	2,098	1,446	10	..	33,160
1911–1915	16,741	11.762	5.696	4,032	2,552	1,549	16	(*b*) 4	42,352
1916–1920	15,744	11,321	5.397	3,756	2,145	1,443	27	5	39,838
1921–1925	18,041	13,293	6,072	4,200	2.564	1,594	14	4	45.782
1926–1930	19,253	12.955	6,279	4,036	3,167	1,506	23	30	47,249
1931–1935	18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480
1936–1940	25,295	17,784	8,982	5,726	4,399	2,187	83	85	64,541
1941–1945	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
Year—									
1942 ..	34,533	23,636	11,722	8,129	5,441	2,431	53	115	86,060
1943 ..	26,302	18,356	9,979	6,263	4.528	2,102	46	97	67,673
1944 ..	26,426	17,857	11,325	6,019	4,506	1,935	31	102	68,201
1945 ..	25,283	16,501	9,905	5,321	3,788	1,868	48	108	62.822
1946 ..	31,684	21,405	11,666	6,700	5,171	2,650	63	157	79.496

(*a*) Included with South Australia prior to 1901. (*b*) Part of New South Wales prior to 1911.

2. **Crude Marriage-rates.**—The crude marriage-rates for each State and Territory for a series of years are given hereunder :—

CRUDE MARRIAGE-RATES(*a*).

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	9.05	7.86	13.32	8.83	8.44	7.35	..	..	8.54
1866–1870	8.06	6.90	9.21	7.39	6.97	6.44	..	..	7.43
1871–1875	7.79	6.37	9.11	7.61	6.43	6.38	..	..	7.16
1876–1880	7.84	6.17	7.68	8.73	6.89	7.51	..	..	7.23
1881–1885	8.55	7.41	8.82	8.36	6.98	8.19	..	..	8.10
1886–1890	7.53	8.15	8.55	6.65	6.96	7.03	..	..	7.75
1891–1895	6.71	6.46	6.52	6.35	7.07	6.00	..	..	6.54
1896–1900	6.95	6.63	6.60	6.16	10.11	6.61	..	..	6.84
1901–1905	7.38	6.89	6.12	6.76	9.30	7.50	*b*1.69	..	7.10
1906–1910	8.10	7.63	7.50	8.32	8.06	7.71	2.68	..	7.88
1911–1915	9.32	8.48	8.69	9.32	8.26	8.00	4.41	*c*2.04	8.86
1916–1920	8.05	7.80	7.62	8.17	6.76	7.17	5.68	1.94	7.25
1921–1925	8.20	8.29	7.62	8.14	7.28	7.40	3.81	1.06	8.04
1926–1930	7.87	7.43	7.11	7.13	7.80	6.96	5.05	3.80	7.53
1931–1935*d*	7.19	7.01	7.34	6.83	7.57	7.19	5.90	5.70	7.16
1936–1940*d*	9.28	9.50	8.95	9.64	9.48	9.25	12.71	7.14	9.33
1941–1945*d*	9.98	9.87	10.05	10.63	9.75	8.61	7.14	7.57	9.95
Year—									
1942(*d*) ..	12.20	12.06	11.32	13.34	11.41	10.08	5.93	8.08	11.99
1943(*d*) ..	9.20	9.30	9.53	10.21	9.50	8.65	4.81	7.11	9.35
1944(*d*) ..	9.15	8.97	10.67	9.72	9.36	7.88	2.97	7.18	9.33
1945(*d*) ..	8.67	8.22	9.20	8.48	7.77	7.51	4.57	7.19	8.50
1946(*d*) ..	10.76	10.57	10.70	10.55	10.49	10.51	5.97	9.88	10.64

(*a*) Number of marriages (not persons married) per 1,000 of mean population. (*b*) Included with South Australia prior to 1901. (*c*) Part of New South Wales prior to 1911. (*d*) Revised in accordance with the preliminary results of the Census of 30th June, 1947.

As the marriage-rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the last six census periods. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows :—1880–82, 48.98 ; 1890–92, 45.74 ; 1900–02, 42.14 ; 1910–12, 50.44 ; 1920–22, 56.02 ; and 1932–34, 42.88. These rates refer, of course, to persons married, and not to marriages as is the case in the preceding table.

3. **Crude Marriage-rates of Various Countries.**—The following table gives the crude marriage-rate for Australia and each State thereof in comparison with the rates for various other countries.

CRUDE MARRIAGE-RATES (*a*) : VARIOUS COUNTRIES.

Country.	1908–13.	1921–25.	1926–30.	1931–35.	1946.
United States of America	(*e*)	10·6	9·9	9·2	16·2
France	7·9	9·5	8·2	7·4	12·7
New Zealand (*b*)	8·5	8·0	7·7	7·3	12·4
Netherlands	7·5	8·2	7·7	7·2	11·4
Rumania	9·5	10·4	9·4	9·0	11·3
Germany	7·8	9·4	8·7	9·3	(*g*)11·2
Canada	(*e*)	7·3	7·3	6·4	10·9
Union of South Africa (*c*)	(*e*)	8·0	9·3	9·4	(*h*)10·8
Belgium	7·9	10·6	9·1	7·8	10·8
Hungary	(*e*)	10·0	9·2	8·5	10·7
Australia (*d*)	**8·4**	**8·1**	**7·6**	**7·2**	**10·6**
New South Wales (*d*)	8·8	8·2	8·0	7·2	10·8
Queensland (*d*)	8·2	7·5	6·9	7·3	10·7
South Australia (*d*)	9·1	8·1	7·0	6·8	10·6
Victoria (*d*)	8·0	8·3	7·4	7·0	10·6
Tasmania (*d*)	7·9	7·4	7·1	7·2	10·5
Western Australia (*d*)	8·1	7·3	8·0	7·6	10·5
Denmark	7·3	7·9	7·8	8·7	9·8
Czechoslovakia	7·7	10·0	9·3	8·2	9·8
Sweden	6·0	6·3	6·7	7·3	9·3
Italy	7·7	9·0	7·3	6·8	9·1
Great Britain and Northern Ireland	7·3	7·7	7·5	7·9	9·0
England and Wales	7·6	7·8	7·7	8·1	9·0
Scotland	6·7	7·1	6·7	7·1	8·9
Northern Ireland	5·2	6·2	5·9	6·2	7·4
Norway	6·2	6·3	6·1	6·5	(*g*) 8·9
Switzerland	7·3	7·7	7·5	7·7	8·7
Argentine	6·8	7·2	7·4	6·5	(*i*) 8·4
Poland	7·0	9·9	9·2	8·4	(*f*) 8·1
Finland	6·1	7·1	7·2	7·2	(*i*) 8·0
Yugoslavia	(*e*)	10·6	9·5	7·8	(*g*) 7·9
Chile	(*e*)	6·9	9·3	6·9	7·8
Portugal	6·9	7·9	6·9	6·6	7·6
Japan	9·3	8·8	8·0	7·6	(*f*) 7·5
Spain	7·0	7·3	7·3	6·5	7·4
Greece	(*e*)	7·5	7·1	6·8	(*f*) 6·5
Mexico	(*e*)	(*e*)	(*e*)	6·1	6·1
Eire	5·2	4·9	4·6	4·6	5·9

(*a*) Number of marriages per 1,000 of mean population. (*b*) Excludes Maoris. (*c*) White population only. (*d*) Excludes full-blood aboriginals. (*e*) Not available. (*f*) 1938 (*g*) 1939. (*h*) 1943. (*i*) 1944.

4. **Age and Conjugal Condition at Marriage.**—(i) *General.* Age at marriage in single ages and previous conjugal condition of bridegrooms and brides in 1945 and 1946 will be found in *Demography Bulletin*, Nos. 63 and 64. A summary in age-groups is given hereunder for these years. There were 5,090 males aged less than twenty-one years married during 1946 while the corresponding number of females was 20,896. At the other extreme there were 80 bachelors, and 29 spinsters in the age-group 65 years and over.

Information regarding the percentage distribution of bridegrooms and brides is shown for 1907–10, in five-year periods thereafter until 1945 and for each of the years 1944, 1945 and 1946.

AGE AND CONJUGAL CONDITION OF PERSONS MARRIED : AUSTRALIA.

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
				1945.				
Under 20..	2,114	..	..	2,114	10,318	6	7	10,331
20–24 ..	23,841	26	71	23,938	28,459	208	350	29,017
25–29 ..	16,392	142	483	17,017	9,778	437	826	11,041
30–34 ..	7,123	249	778	8,150	3,842	401	904	5,147
35–39 ..	3,224	347	792	4,363	1,865	372	664	2,901
40–44 ..	1,602	359	566	2,527	899	365	410	1,674
45–49 ..	781	451	399	1,631	468	385	233	1,086
50–54 ..	357	497	248	1,102	226	335	138	699
55–59 ..	205	512	137	854	111	257	60	428
60–64 ..	84	404	48	536	56	199	16	271
65 and over	70	496	24	590	21	191	15	227
Total ..	55,793	3,483	3,546	62,822	56,043	3,156	3,623	62,822
				1946.				
Under 20..	2,250	..	1	2,251	13,250	8	12	13,270
20–24 ..	31,216	30	98	31,344	37,260	245	459	37,964
25–29 ..	22,061	162	729	22,952	12,330	627	1,091	14,048
30–34 ..	8,861	330	1,006	10,197	4,551	637	1,085	6,273
35–39 ..	3,806	376	970	5,152	1,986	455	787	3,228
40–44 ..	1,686	391	683	2,760	977	421	444	1,842
45–49 ..	853	418	421	1,692	509	397	272	1,178
50–54 ..	385	494	231	1,110	265	330	125	720
55–59 ..	191	520	149	860	132	266	73	471
60–64 ..	102	400	59	561	69	172	21	262
65 and over	80	504	33	617	29	196	14	239
Not stated	..	..	..	..	..	1	..	1
Total ..	71,491	3,625	4,380	79,496	71,358	3,755	4,383	79,496
				PERCENTAGE OF TOTAL.				
	%	%	%	%	%	%	%	%
1907–10 ..	93.11	6.41	0.48	100.00	94.17	5.22	0.61	100.00
1911–15 ..	93.92	5.51	0.57	100.00	94.62	4.62	0.76	100.00
1916–20 ..	92.82	6.33	0.85	100.00	93.44	5.59	0.97	100.00
1921–25 ..	92.18	6.38	1.44	100.00	92.99	5.49	1.52	100.00
1926–30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931–35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936–40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941–45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1944 ..	90.79	4.94	4.27	100.00	91.45	4.14	4.41	100.00
1945 ..	88.81	5.54	5.65	100.00	89.21	5.02	5.77	100.00
1946 ..	89.93	4.56	5.51	100.00	89.76	4.73	5.51	100.00

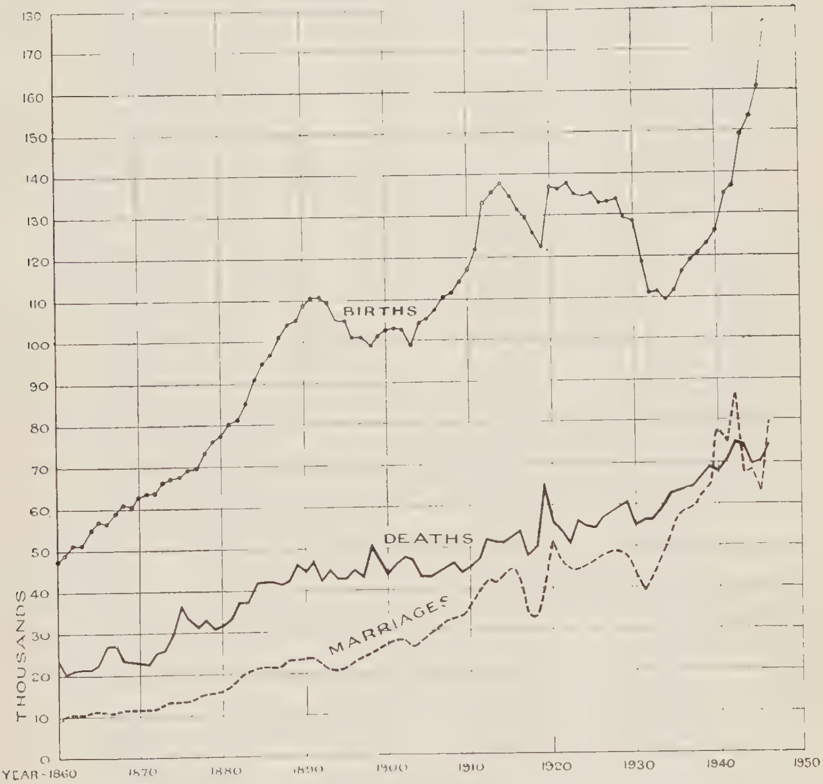
(ii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1945 and 1946 are shown in single years in *Demography Bulletin*, Nos. 63 and 64. A summary in age-groups of five years is given below :—

RELATIVE AGES OF BRIDEGROOMS AND BRIDES : AUSTRALIA.

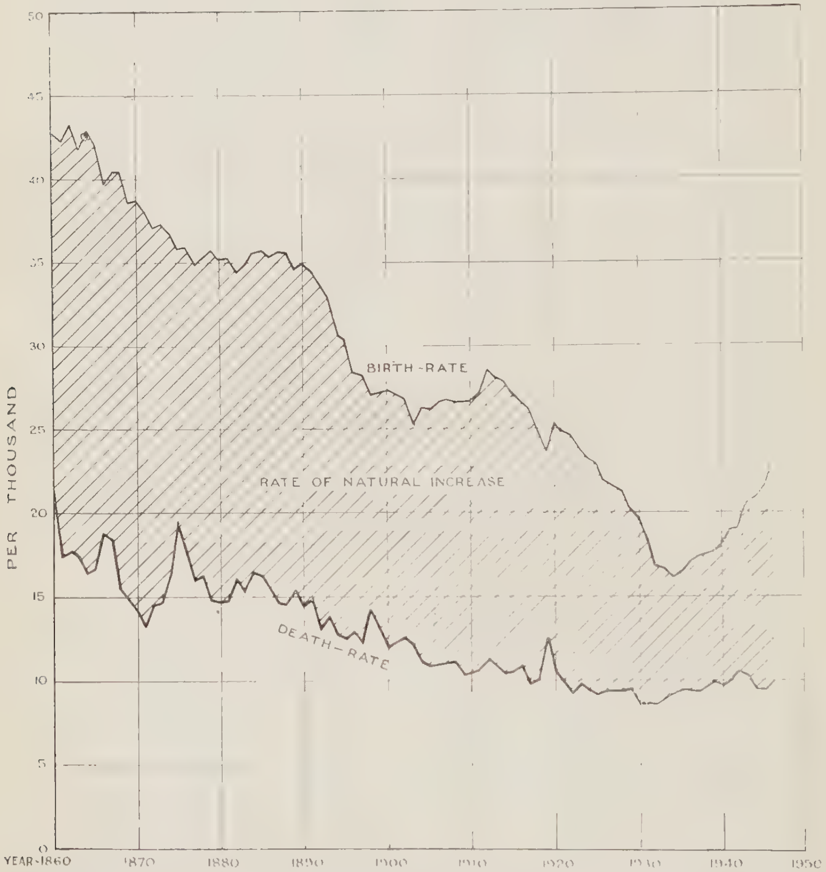
Age of Bridegrooms (Years).	Total Bridegrooms.	Age of Brides (Years).							
		Under 15.	15–19.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and over.
1945.									
Under 20 ..	2,114	7	1,457	606	39	4	..	..	1
20–24 ..	23,938	2	6,301	15,488	1,888	209	41	7	2
25–29 ..	17,017	..	1,947	9,240	4,577	1,025	186	29	13
30–34 ..	8,150	..	454	2,640	2,725	1,679	504	110	38
35–39 ..	4,363	..	119	759	1,161	1,158	819	247	100
40–44 ..	2,527	..	29	190	428	612	607	441	220
45–49 ..	1,631	..	9	65	143	273	372	349	420
50–54 ..	1,102	..	3	14	51	101	219	259	455
55–59 ..	854	..	3	13	15	55	100	142	526
60–64 ..	536	..	..	1	8	18	34	63	412
65 and over	590	..	..	1	6	13	19	27	524
Total Brides	62,822	9	10,322	29,017	11,041	5,147	2,901	1,674	2,711
1946.									
Under 20 ..	2,251	2	1,535	684	24	5	1	..	..
20–24 ..	31,344	8	8,335	20,125	2,550	278	39	9	..
25–29 ..	22,952	2	2,650	12,599	6,074	1,312	260	43	12
30–34 ..	10,197	1	559	3,403	3,333	2,125	606	131	39
35–39 ..	5,152	..	134	830	1,382	1,432	944	337	93
40–44 ..	2,760	1	25	213	452	683	679	456	251
45–49 ..	1,692	..	11	70	145	278	389	370	429
50–54 ..	1,110	..	6	24	43	92	179	254	512
55–59 ..	860	..	1	7	27	42	88	146	549
60–64 ..	(*a*) 560	..	..	6	13	19	31	57	434
65 and over	617	..	..	3	5	7	12	39	551
Total Brides	79,496	14	13,256	37,964	14,048	6,273	3,228	1,842	2,870

(*a*) Excludes one bridegroom the age of whose bride was not stated.

(iii) *Average Ages of Bridegrooms and Brides.* The age at marriage of brides declined slightly during recent years to an average of about 25½ years, although in the period 1937–39 this decline was temporarily arrested and the average rose to almost 26 years. The ages for the past six years were :—1941, 25.75 ; 1942, 25.55 ; 1943, 25.62 ; 1944, 25.57 ; 1945, 25.93 ; and 1946, 25.51. For the following five-yearly periods the average ages were :—1911–15, 25.76 years ; 1916–20, 26.05 years ; 1921–25, 25.76 years ; 1926–30, 25.57 years ; 1931–35, 25.50 years ; 1936–40, 25.72 years ; and 1941–45, BIRTHS, DEATHS, AND MARRIAGES—AUSTRALIA, 1860 TO 1946.

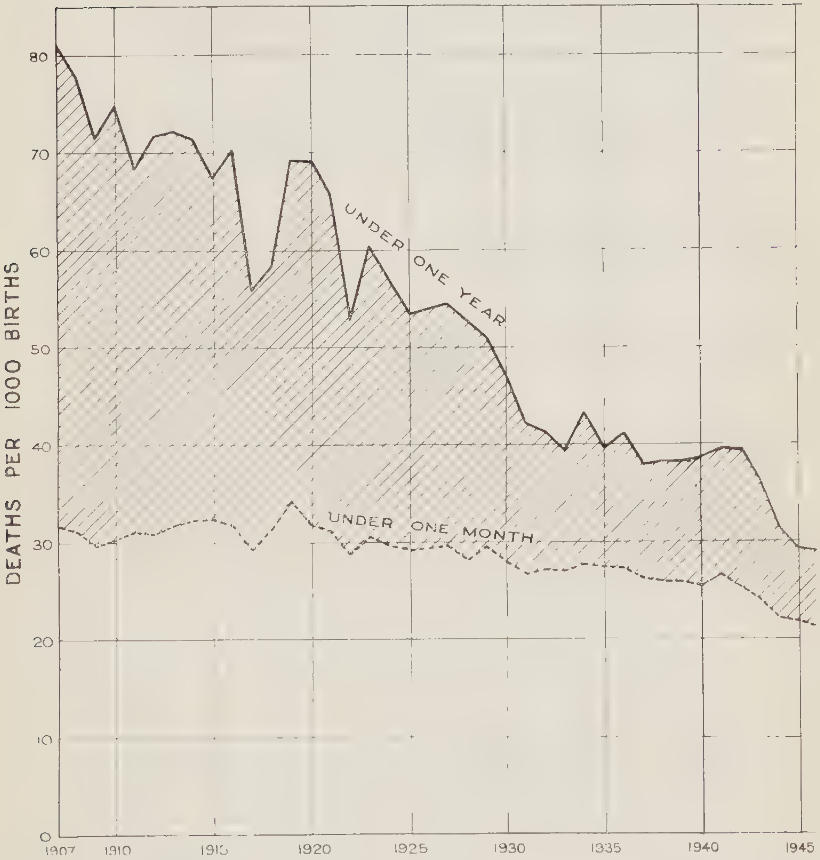


RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE—AUSTRALIA, 1860 TO 1946.



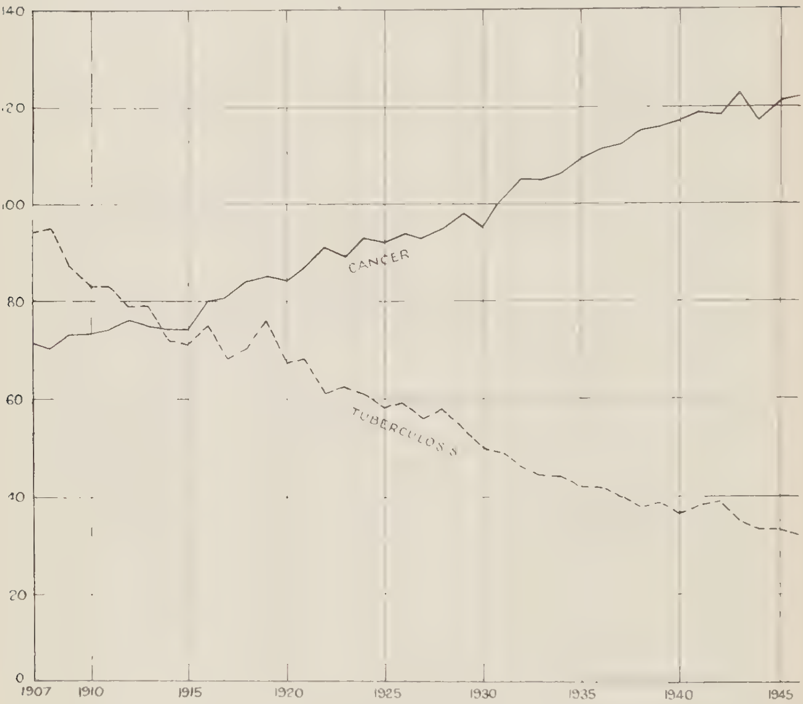
EXPLANATION.—The upper curve represents the number of births per 1,000 persons, while the lower curve represents the corresponding death-rate. The distance between the two curves is the rate of natural increase

INFANTILE MORTALITY RATES—AUSTRALIA, 1907 TO 1946.



EXPLANATION.—This graph shows the marked improvement in infantile mortality rates over the past 40 years. The improvement has been confined mainly to children over one month, very little change having occurred in the first month of life (see page 773)

DEATH-RATES—CANCER AND TUBERCULOSIS—AUSTRALIA, 1907 TO 1946.



(See page 795).

Explanation.—The vertical scale represents the number of deaths per 100,000 of the population.

25.68 years. The average age of bridegrooms was 29.04 in 1941, 28.80 in 1942, 28.99 in 1943, 28.85 in 1944, 29.29 in 1945, and 28.73 in 1946. It follows, therefore, that brides are, generally speaking, three and one-quarter years younger than bridegrooms. The average age of brides and bridegrooms for the years 1940–46 shows the effects of war-time conditions. The proportion of young persons marrying during those years increased, thereby causing decreases in the average ages of both brides and bridegrooms. The difference in age between brides and bridegrooms was 3.29 years in 1941, 3.25 in 1942, 3.37 in 1943, 3.28 in 1944, 3.36 in 1945, and 3.22 in 1946.

5. **Previous Conjugal Condition.**—The number of bachelors and spinsters, widowed and divorced persons, who were married during 1946 has already been given. The following table shows the conjugal condition of the contracting parties. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED: AUSTRALIA, 1946.

Conjugal Condition of Bridegrooms.	Total Bridegrooms.	Conjugal Condition of Brides.		
		Spinsters.	Widows.	Divorced.
Bachelors	71,491	66,423	2,147	2,921
Widowers	3,625	1,967	1,120	538
Divorced	4,380	2,968	488	924
Total Brides ..	79,496	71,358	3,755	4,383

6. **Birthplace of Persons Marrying.**—A table showing birthplace of persons marrying in 1911, 1921 and 1940 may be found on p. 326 of Official Year Book No. 34. In *Demography Bulletin*, Nos. 63 and 64, the relative birthplaces of bridegrooms and brides marrying in 1945 and 1946 will be found tabulated in detail. No such tabulations were made for the years 1941 to 1944.

7. **Occupation and Age of Bridegrooms.**—For 1938 the average ages at marriage of bridegrooms in the larger classes of occupations were as follows:—Professional, 30.8 years; Domestic, 30.5 years; Commercial, 29.6 years; Transport, 29.8 years; Industrial, 28.9 years; and Primary Producers, 30.9 years. Tabulation of this information was discontinued during the war years.

8. **Celebration of Marriages.**—In all the States marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1946 belonged to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been bracketed under the heading "Other Christian." The figures for 1946 are shown in the following table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

MARRIAGES IN EACH DENOMINATION, 1946.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Per Cent.
Church of England	13,231	6,685	3,404	1,647	2,215	1,059	13	72	28,326	35.63
Roman Catholic ..	6,282	4,022	2,462	758	691	447	16	44	14,722	18.52
Methodist ..	3,512	3,200	2,109	2,267	785	425	21	8	12,327	15.51
Presbyterian ..	3,818	4,192	2,249	363	485	168	5	22	11,302	14.22
Baptist	479	658	234	223	56	105	..	1	1,756	2.21
Congregational ..	496	200	170	262	105	57	..	..	1,389	1.75
Church of Christ ..	143	415	93	222	54	26	..	..	953	1.20
Lutheran.. ..	43	94	231	316	4	..	..	..	688	0.86
Salvation Army ..	114	109	114	41	25	22	..	..	425	0.53
Seventh-Day Adventist.. ..	83	31	31	9	19	5	..	..	178	0.22
Greek Orthodox ..	75	22	19	10	17	..	..	..	143	0.18
Unitarian ..	6	24	..	6	..	..	..	..	36	0.05
Other Christian ..	131	75	140	10	17	20	..	..	393	0.49
Hebrew ..	120	173	9	1	14	..	..	..	317	0.40
Total .	28,533	19,999	11,265	6,135	4,487	2,334	55	147	72,955	91.77
Civil Officers ..	3,151	1,406	401	565	684	316	8	10	6,541	8.23
Grand Total ..	31,684	21,405	11,666	6,700	5,171	2,650	63	157	79,496	100.00
Percentage of Total Marriages celebrated by—										
Ministers of Religion ..	% 90.05	% 93.43	% 96.56	% 91.57	% 86.77	% 88.08	% 87.30	% 93.63	% 91.77	
Civil Officers ..	9.95	6.57	3.44	8.43	13.23	11.92	12.70	6.37	8.23	

§ 2. Fertility and Reproduction.

1. **Introductory.**—Of the two elements of increase in the population, namely natural increase and net migration, the former has been by far the more important over the past few decades. The level of natural increase depends on the excess of births over deaths and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

2. **Number of Live Births.**—(i) *Year*, 1946. There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the number of live births.

The number of live births registered in Australia during 1946 is shown in the table below. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

LIVE BIRTHS, 1946.

Male Births.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tas.	N.T.	A.C.T.	Australia.
Single births	33,959	23,540	13,602	7,921	6,161	3,494	66	251	88,994
Twins ..	725	563	284	179	124	66	..	3	1,944
Triplets ..	6	16	2	6	..	..	..	..	30
Total ..	34,690	24,119	13,888	8,106	6,285	3,560	66	254	90,968

Female Births.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tas.	N.T.	A.C.T.	Australia.
Single births	31,750	22,016	12,861	7,560	5,674	3,212	66	259	83,398
Twins ..	800	533	272	147	141	75	..	5	1,973
Triplets ..	7	25	3	..	5	..	..	..	40
Total ..	32,557	22,574	13,136	7,707	5,820	3,287	66	264	85,411

Total Births.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tas.	N.T.	A.C.T.	Australia.
Single births	65,709	45,556	26,463	15,481	11,835	6,706	132	510	172,392
Twins ..	(a) 1,525	(b) 1,096	556	326	(c) 265	(d) 141	..	8	(e) 3,917
Triplets ..	(f) 13	(g) 41	(g) 5	6	(g) 5	..	..	..	(h) 70
Total ..	67,247	46,693	27,024	15,813	12,105	6,847	132	518	176,379

Total Confinements (Live Births).

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tas.	N.T.	A.C.T.	Australia.
Mothers of Nuptial Children ..	63,580	44,435	25,142	15,144	11,450	6,505	108	508	166,872
Mothers of Ex-nuptial Children ..	2,922	1,697	1,601	502	528	279	24	6	7,559
Total Mothers	66,502	46,132	26,743	15,646	11,978	6,784	132	514	174,431

(a) Excludes 51 still-born twins. (b) Excludes 28 still-born twins. (c) Excludes 17 still-born twins. (d) Excludes 15 still-born twins. (e) Excludes 111 still-born twins. (f) Excludes 2 still-born triplets. (g) Excludes 1 still-born triplet. (h) Excludes 5 still-born triplets.

Note.—For Queensland and South Australia the differentiation between single and multiple births cannot be regarded as completely accurate as the registration procedure there adopted differs from that in other States.

(ii) *Years* 1861 *to* 1946. The annual average number of live births in each State and Territory for each five-year period from 1861 to 1945 and the total number of live births in each State and Territory for each year 1942 to 1946 are given in the following table :—

LIVE BIRTHS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	15,992	24,670	2,352	6,095	653	3,090	. .	. .	52,852
1866–1870	18,529	26,210	4,524	7,014	761	2,936	. .	. .	59,974
1871–1875	21,308	27,272	5,856	7,279	807	3,064	. .	. .	65,586
1876–1880	25,514	26,470	7,507	9,262	922	3,433	. .	. .	73,108
1881–1885	31,793	28,051	9,796	11,324	1,093	4,286	. .	. .	86,343
1886–1890	37,660	34,461	14,030	10,640	1,539	4,742	. .	. .	103,072
1891–1895	39,513	36,171	14,573	10,619	2,048	4,959	. .	. .	107,883
1896–1900	36,716	31,089	14,193	9,436	4,480	4,681	. .	. .	100,595
1901–1905	37,968	30,182	13,770	8,883	6,682	5,128	(*a*) 31	. .	102,644
1906–1910	42,967	31,257	15,022	9,699	7,690	5,465	31	. .	112,131
1911–1915	51,631	35,205	19,100	12,092	8,844	5,807	47	(*b*) 43	132,769
1916–1920	51,543	33,339	19,438	11,526	7,728	5,469	83	40	129,166
1921–1925	54,439	35,964	20,058	11,744	8,055	5,566	68	33	135,927
1926–1930	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763
1931–1935	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302
1936–1940	47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972
1941–1945	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
Year—									
1942 . .	52,647	35,927	21,166	11,278	9,901	5,305	92	392	136,708
1943 . .	57,265	39,117	23,234	13,145	10,481	5,597	80	376	149,295
1944 . .	59,612	39,358	24,520	13,311	10,870	5,200	89	384	153,344
1945 . .	61,662	41,200	26,713	14,033	10,672	5,785	90	405	160,560
1946 . .	67,247	46,693	27,024	15,813	12,105	6,847	132	518	176,379

(*a*) Included with South Australia prior to 1901.

(*b*) Part of New South Wales prior to 1911.

3. **Crude Birth-rates.**—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the crude birth-rate. The crude birth-rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period.

Crude birth-rates for each five-year period from 1861 to 1945 and for each year from 1942 to 1946 for each State and Territory are set out below :—

CRUDE BIRTH-RATES.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	42.75	43.53	43.37	43.30	35.68	33.99	..	..	42.44
1866–1870	40.85	39.50	44.42	40.21	32.35	30.08	..	..	39.60
1871–1875	39.13	35.68	42.69	37.17	31.08	29.69	..	..	37.04
1876–1880	38.61	32.12	38.55	37.85	32.49	31.49	..	..	35.46
1881–1885	37.99	30.99	37.39	38.20	34.23	35.10	..	..	35.17
1886–1890	36.63	32.79	39.24	34.23	35.72	34.73	..	..	35.22
1891–1895	33.20	30.96	35.13	31.47	31.49	32.89	..	..	32.42
1896–1900	28.12	26.24	30.27	26.58	28.54	28.29	..	..	27.68
1901–1905	26.83	25.05	26.73	24.87	30.55	28.64	(b)7.04	..	26.36
1906–1910	27.35	25.12	26.87	25.57	29.56	29.14	8.41	..	26.67
1911–1915	28.75	25.39	29.14	28.33	28.62	30.01	12.70	c18.76	27.78
1916–1920	26.31	23.04	27.53	25.19	24.50	27.31	17.82	16.11	25.36
1921–1925	24.76	22.42	25.20	22.76	22.88	25.84	18.19	9.61	23.89
1926–1930	21.79	19.67	21.92	19.42	21.55	22.29	15.70	14.65	21.00
1931–1935*d*	17.29	15.60	18.49	14.89	18.37	19.95	15.99	15.81	16.95
1936–1940*d*	17.51	16.20	19.48	15.82	19.16	20.57	19.84	18.50	17.51
1941–1945*d*	19.78	19.25	22.26	20.41	21.71	22.23	11.36	26.84	20.26
Year—									
1942(*d*) ..	18.59	18.33	20.43	18.51	20.77	22.00	10.30	27.56	19.05
1943(*d*) ..	20.04	19.82	22.19	21.43	21.98	23.04	8.37	27.57	20.63
1944(*d*) ..	20.65	19.78	23.10	21.49	22.57	21.17	8.53	27.05	20.98
1945(*d*) ..	21.13	20.53	24.81	22.37	21.88	23.27	8.57	26.98	21.73
1946(*d*) ..	22.83	23.05	24.79	24.89	24.56	27.15	12.50	32.61	23.62

(*a*) Number of births per 1,000 of mean population. (*b*) Included with South Australia prior to 1901. (*c*) Part of New South Wales prior to 1911. (*d*) Revised rates based on mean populations adjusted in accordance with the preliminary results of the Census of 30th June, 1947.

NOTE.—The birth-rates in the table above are based on live births registered in the respective States and Territories. Some years ago a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border, but with improved hospital facilities in the Territory the movement to outside hospitals rapidly diminished and has been reversed since 1939. The following rates, based on births in respect of which the mother's usual residence is the Australian Capital Territory, are a truer measure of birth-rates in the Australian Capital Territory :—

Annual Average.		Year.	
1921–1925 ..	.. 17.07	1942	.. 24.11
1926–1930 ..	.. 22.45	1943	.. 22.95
1931–1935 ..	.. 19.53	1944	.. 21.41
1936–1940 ..	.. 19.29	1945	.. 22.58
1941–1945 ..	.. 23.06	1946	. 26.00

The variations similarly caused in the birth-rates for the States and Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1946 :—New South Wales, 22.85 ; Victoria, 23.00 ; Queensland, 24.92 ; South Australia, 24.86 ; Western Australia, 24.57 ; Tasmania, 27.22 ; and Northern Territory, 13.16.

The preceding table shows a marked reduction in the crude birth-rate since 1861. The average annual rate, which for the five years ended 1865 was 42.44, fell to 27.68 for the five years ended 1900. In the earlier years of the present century the rate fluctuated somewhat but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16·39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages but with subsequent improvement in economic conditions the rate rose. Since 1940 the rate has increased quite appreciably due both to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter has resulted in an abnormal number of first births but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience.

4. **Crude Birth-rates of Various Countries.**—The following table gives the crude birth-rates for Australia and each State in comparison with the rates for various other countries.

CRUDE BIRTH-RATES (*a*) : VARIOUS COUNTRIES.

Country.	1908–13.	1921–25.	1926–30.	1931–35.	1946
Mexico	(*c*)	(*f*) 31.9	36.7	43.1	42.5
Ceylon	36.9	39.2	40.4	36.9	(*i*) 40.5
Egypt	43.6	43.0	44.3	42.9	(*i*) 39.6
Chile	(*d*) 39.9	39.4	41.6	33.6	32.4
Netherlands	29.1	25.7	23.2	21.2	30.2
Finland	29.5	24.7	22.5	19.5	27.7
Union of South Africa (*b*)	(*d*) 31.9	27.1	25.9	24.1	26.9
Canada	(*c*)	27.4	24.1	21.4	26.9
Yugoslavia	(*c*)	35.0	34.2	31.8	(*h*) 25.9
Japan	32.9	34.6	33.5	31.6	25.3
New Zealand (*j*)	26.5	22.2	19.7	17.0	25.2
Portugal	34.6	33.2	31.2	29.0	25.0
Poland	37.4	34.7	32.2	27.8	(*h*) 24.6
Argentine	37.1	32.4	30.1	26.4	(*i*) 24.4
Rumania	43.1	37.9	35.2	32.9	23.8
Australia (*k*)	**27.4**	**23.9**	**21.1**	**16.9**	**23.6**
Tasmania (k)	29.6	26.0	22.7	20.0	27.1
South Australia (k)	27.1	22.7	19.2	14.9	24.9
Queensland (k)	28.2	25.0	21.3	18.5	24.8
Western Australia (k)	28.9	23.0	22.0	18.4	24.6
Victoria (k)	25.3	22.4	19.7	15.6	23.1
New South Wales (k)	28.2	24.9	22.1	17.3	22.8
Greece	(*c*)	23.0	30.2	29.5	(*h*) 23.5
Denmark	27.1	22.3	19.4	17.7	23.4
United States of America	(*e*) 25.1	22.5	19.7	(*g*) 16.9	23.3
Eire	23.1	20.3	20.1	19.4	22.9
Italy	32.4	29.8	26.8	23.8	22.5
Norway	26.0	22.2	18.0	15.2	22.5
Czechoslovakia	31.1	27.1	23.2	19.6	22.2
France	19.5	19.3	18.2	16.5	20.6
Germany	29.5	22.1	18.4	16.6	(*h*) 20.4
Switzerland	24.7	19.5	17.6	16.4	20.0
Sweden	24.4	19.1	15.9	14.1	19.6
Great Britain and Northern Ireland	24.6	20.4	17.2	15.5	19.4
Northern Ireland	23.1	23.1	21.2	20.0	22.6
Scotland	26.2	23.0	20.0	18.2	20.3
England and Wales	24.9	19.9	16.5	15.0	19.1
Hungary	(*d*) 34.3	29.4	26.0	22.4	18.4
Belgium	23.4	20.4	18.6	16.8	18.2
Spain	32.1	29.8	28.5	27.1	(*h*) 16.5

(*a*) Number of births per 1,000 of mean population. (*b*) White population only. (*c*) Not available. (*d*) 1911–13. (*e*) 1915. (*f*) 1922–25. (*g*) 1933–35. (*h*) 1939. (*i*) 1943 (*j*) Excluding Maoris. (*k*) Excluding full-blood aboriginals.

5. **Fertility-rates.**—The principal demographic factors affecting the level of crude birth-rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a high percentage of married women of child-bearing age will have a much higher crude birth-rate than one with a low percentage, although the fertilities of the two populations may be identical.

In order to overcome this difficulty births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility-rate.

The following table sets out for certain periods commencing with 1880–82 the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be 15–44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

CRUDE BIRTH-RATES AND FERTILITY-RATES : AUSTRALIA.

Period.	Average Annual Rates.			Index Nos. (Base : 1880–82 = 100).		
		Fertility-rates.			Fertility-rates.	
	Crude Birth-rate. (*a*)	Births per 1,000 Women aged 15–44 Years.	Nuptial Births per 1,000 Married Women aged 15–44 Years.	Crude Birth-rate. (*a*)	Births per 1,000 Women aged 15–44 Years.	Nuptial Births per 1,000 Married Women aged 15–44 Years.
1880–82 ..	35.3	170	321	100	100	100
1890–92 ..	34.5	159	332	98	94	103
1900–02 ..	27.2	117	235	77	69	73
1910–12 ..	27.2	117	236	77	69	74
1920–22 ..	25.0	107	197	71	63	61
1932–34 ..	16.7	71	131	49	42	41
1941–43 ..	19.5	84	141	55	49	44

(*a*) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth-rate. Thus while the nuptial birth-rate for married women increased by only 8 per cent. over the period 1932–34 to 1941–43 the crude birth-rate rose by 17 per cent. due principally to the greatly increased number of marriages during that period.

6. **Specific Fertility-rates.**—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably and a clearer view of the fertility of the population can be obtained from an examination of what are known as its specific fertility-rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Specific fertility-rates are usually calculated on the basis of female births rather than total births and are frequently expressed in age-groups as well as in single ages. The following table sets out specific fertility-rates for Australia over the period 1921 to 1946 in five-yearly age-groups.

SPECIFIC FERTILITY-RATES(*a*) : AUSTRALIA.

Age-group (Years).	1921.	1926.	1931.	1936.	1941.	1942.	1943.	1944.	1945.	1946.
15–19 ..	12.83	14.02	13.08	12.18	11.90	11.77	11.86	11.02	11.41	12.63
20–24 ..	65.45	60.23	53.08	50.33	59.42	59.01	65.01	62.49	64.40	73.52
25–29 ..	82.24	76.82	62.47	62.02	70.78	70.41	76.29	78.25	81.17	89.51
30–34 ..	68.50	61.90	51.25	46.33	49.72	50.67	56.46	59.48	61.47	65.03
35–39 ..	49.48	43.55	33.23	28.89	28.69	29.07	31.27	35.01	36.60	37.43
40–44 ..	21.66	17.63	13.61	10.19	9.52	9.55	9.72	10.69	11.42	11.87
45–49 ..	2.10	1.90	1.45	1.11	0.80	0.79	0.78	0.88	0.91	1.03

(*a*) Number of female births per 1,000 women in each age-group.

The table above indicates that the most fertile age-group is 25–29 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the older age-groups. During the period 1936 to 1946 a rise in fertility occurred in all but the oldest age-group.

7. **Gross and Net Reproduction Rates.**—A single measure of fertility known as the gross reproduction rate is obtained by adding together the specific fertility-rates for each single age in the child-bearing group. This measure indicates the number of female children who would be born on the average to women living right through the child-bearing period, if the fertility conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers of the population and is to be preferred to the crude birth-rate for measuring and making comparisons of fertility.

The gross reproduction rate measures fertility, but, because it does not take mortality into account, it does not measure the rate at which the population is replacing or reproducing itself. A measure of this nature is obtained by multiplying the specific fertility-rates by the number of females in the corresponding age-group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality and the result is known as the net reproduction rate. The net reproduction rate for a specified period indicates the average number of female children who would ultimately be born to newly-born girls of the period, if the fertility and mortality conditions remain unchanged. It represents the rate at which women replace themselves in the population, i.e., the rate at which the population will multiply itself each generation if the current conditions of fertility and mortality continue. A net reproduction rate of unity for a period indicates that the population will ultimately become stationary if the fertility and mortality of the period remain unchanged. If it is greater than unity, the population will ultimately increase, if less than unity, it will ultimately decrease.

The following table gives the gross and net reproduction rates for Australia from 1881 to 1946.

GROSS AND NET REPRODUCTION RATES : AUSTRALIA.

Year.	Gross Reproduction Rate.	Net Reproduction Rate.	Year.	Gross Reproduction Rate.	Net Reproduction Rate.
1881 (*a*).. ..	2.65	(*b*) 1.88	1937(*g*) ..	1.075	0.981
1891 (*a*).. ..	2.30	(*b*) 1.73	1938(*g*) ..	1.069	0.976
1901 (*a*).. ..	1.74	(*c*) 1.39	1939(*g*) ..	1.080	0.986
1911	1.705	(*d*) 1.421	1940(*g*) ..	1.100	1.004
1921	1.511	(*e*) 1.313	1941(*g*) ..	1.154	1.053
1932	1.061	(*f*) 0.967	1942(*g*) ..	1.156	1.056
1933(*g*)	1.052	0.959	1943(*g*) ..	1.257	1.148
1934(*g*)	1.030	0.939	1944(*g*) ..	1.289	1.176
1935(*g*)	1.032	0.941	1945(*g*) ..	1.337	1.220
1936(*g*)	1.060	0.967	1946(*g*) ..	1.455	1.328

(*a*) Approximate only. (*b*) 1881–1890 mortality experience used. (*c*) 1891–1900 mortality experience used. (*d*) 1901–1910 mortality experience used. (*e*) 1920–1922 mortality experience used. (*f*) 1932–1934 mortality experience used for 1932 and subsequent years. In so far as mortality has decreased since then, the net reproduction rates tend to underestimate the true position. (*g*) The numbers of females of child-bearing age on which rates for these years are based have not been adjusted in accordance with the results of the Census of 30th June, 1947.

Since 1881 there has been a substantial downward trend in both rates, but the gross rate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939, and if the low fertility of those years were to continue, ultimate population decline would be certain. However, the rate increased considerably over the war years owing principally to the war-time marriage boom, and increased further in the immediate post-war period, mainly as a result of demobilization. The main flaw in these rates is that fluctuations in the marriage-rate affect them quite substantially, but sufficient data are lacking to completely eliminate the effects of fluctuations in marriages. However, consideration is given below to the fertility of marriages.

8. **Gross and Net Reproduction Rates of Various Countries.**—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries. It will be observed that Australia occupies a relatively low position in the scale.

GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES.

Country.	Period.	Reproduction Rate. Gross.	Reproduction Rate. Net.
Japan ..	1937	2.14	1.44
Union of South Africa (*b*) ...	1939	1.50	1.35
Eire	1935–37	1.48	1.22
Bulgaria ..	1933–36	1.67	1.19
Portugal ..	1939	1.66	(*a*)
Canada ..	1939	1.32	(*a*)
Netherlands ..	1939	1.29	1.17
Hungary ..	1939	1.22	(*a*)
Finland ..	1939	1.22	(*a*)
Italy	1935–37	1.43	1.13
Poland ..	1934	1.50	1.11
New Zealand (*c*)	1939	1.15	1.07
Spain ..	1937	1.44	1.03
United States of America (*b*) ..	1938	1.09	1.00

Country.	Period.	Reproduction Rate. Gross.	Reproduction Rate. Net.
Austria ..	1939	(*a*)	1.00
Latvia ..	1939	1.18	0.99
Australia ..	**1939**	**1.08**	**0.99**
Germany ..	1939	(*a*)	0.98
Scotland ..	1939	1.05	0.92
Denmark ..	1939	1.04	0.92
France ..	1939	(*a*)	0.90
Belgium ..	1939	1.03	0.86
Norway ..	1939	0.93	0.86
Sweden ..	1939	0.91	0.83
England and Wales ..	1939	0.89	0.81
Czechoslovakia ..	1935	(*a*)	0.79
Estonia ..	1938	0.98	0.79
Switzerland ..	1939	0.88	0.79

(*a*) Not available. (*b*) White population only. (*c*) Excluding Maoris.

9. **Fertility of Marriages.**—In issues of the Official Year Book prior to No. 35 estimates of the fertility of marriages were published. These were calculated by relating the births of one five-yearly period to the marriages in the preceding five years (see Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current marriage fertility for the years 1933 to 1946.

FERTILITY OF MARRIAGES: AUSTRALIA.

Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.
1933	2.36	1938 ..	2.22	1943 ..	2.21
1934	2.30	1939 ..	2.20	1944 ..	2.28
1935	2.27	1940 ..	2.18	1945 ..	2.36
1936	2.28	1941 ..	2.19	1946 ..	2.55
1937	2.27	1942 ..	2.12		

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. It will be noted that there was an almost continuous decline to 1942, but a pronounced increase from 1943 onwards. Comparing this index with the net reproduction rate it is evident that the rise in the latter since 1935 has been caused by an increasing number of marriages, due firstly to the postponed depression marriages, and secondly to war-time marriages, and only in the last four years to any increase in the fertility of marriages.

10. **Masculinity of Live Births.**—(i) *General.* The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example State totals), considerable variation is shown. For 1946 the figures ranged from 96.21 in Australian Capital Territory to 108.31 in Tasmania. The averages for the last intercensal period 1933–47 were as follows:—New South Wales, 105.05; Victoria, 105.52; Queensland, 105.15; South Australia, 105.93; Western Australia, 104.16; Tasmania, 105.76; Australia, 105.21. The following table shows the figures for Australia for each ten-year period from 1901 to 1940 and for each year 1943 to 1946:—

MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA.

Particulars.	1901–10.	1911–20.	1921–30.	1931–40.	1943.	1944.	1945.	1946.
Total Births ..	105.22	105.27	105.55	105.12	104.68	104.45	105.57	106.51
Ex-nuptial Births ..	104.08	105.25	105.16	105.36	107.30	106.86	107.77	110.42

(a) Number of males born for every 100 female births.

(ii) *Masculinity of Nuptial and Ex-nuptial Births—Various Countries.* A table showing the masculinity of nuptial and ex-nuptial births for various countries appears on p. 942 of Official Year Book No. 22.

11. **Ex-nuptial Live Births.**—(i) *General.* The number of ex-nuptial live births reached a peak, 7,438, in 1913, but it fell considerably to 4,775 in 1940. Since 1940, however, the number has risen sharply to 7,613 in 1946. The average number of ex-nuptial live births in Australia during the five years 1911–15 was 7,209, and for the period 1941–45 it was only 6,201, a decline of 14.0 per cent., whereas the annual average total live births for the same period increased by 10.6 per cent., from 132,769 to 146,886; hence a comparison between the results for these two periods shows that the proportion of ex-nuptial births has fallen from 5.43 to 4.23 per cent. of all births.

The variations of the ex-nuptial birth-rates as between the individual States and Territories for 1946 are shown below. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

EX-NUPTIAL LIVE BIRTHS AND BIRTH-RATES, 1946.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Number ..	2,950	1,708	1,611	503	529	282	24	6	7,613
Percentage of Total Births	4.39	3.66	5.96	3.18	4.37	4.12	18.18	1.16	4.32

The numbers of births and the rates at intervals from 1901 to 1946 are as follows:—

EX-NUPTIAL LIVE BIRTHS AND BIRTH-RATES: AUSTRALIA.

Particulars.	Annual Averages—				1941.	1942.	1943.	1944.	1945.	1946.
	1901–10.	1911–20.	1921–30.	1931–40.						
Number of Ex-nuptial Births	6,408	6,836	6,238	5,133	5,167	5,282	6,505	6,905	7,195	7,613
Percentage of Total Births	6.05	5.22	4.66	4.40	3.84	3.86	4.36	4.50	4.48	4.32

It is, of course, possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality, and it is not unlikely that the majority of unregistered births are ex-nuptial.

(ii) *Rate of Ex-nuptiality.* A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45 years. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows :—1880–82, 14.49; 1890–92, 15.93; 1900–02, 13.30; 1910–12, 12.53; and 1920–22, 10.50. The estimated number for the years 1930–32 was 7.87. The comparative results for various countries given on p. 944 of Official Year Book No. 22 were taken from the *Annuaire International de Statistique*, Vols. II. and V., and showed that ex-nuptial births varied from 38 per 1,000 unmarried women aged 15 to 49 years in Hungary (1906–15) to 4 in Ireland (1909–12) and Bulgaria (1910–11). The rate for Australia was 12 per thousand for the years 1906–15.

(iii) *Comparison of Rates.* The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional reduction in the ex-nuptial birth-rate than in the nuptial rate :—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH-RATES(*a*) : AUSTRALIA.

Birth-rate.	Annual Averages—				1943.	1944.	1945.	1946.
	1901–10.	1911–20.	1921–30.	1931–40.				
Ex-nuptial ..	1.60	1.39	1.04	0.76	0.90	0.95	0.98	1.02
Nuptial	24.91	25.18	21.40	16.47	19.73	20.03	20.75	22.60
Total ..	26.51	26.57	22.44	17.23	20.63	20.98	21.73	23.62

(*a*) Number of births per 1,000 of mean population.

12. **Legitimations.**—In the several States Acts have been passed to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their purposes, born before or after the passing thereof, is deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1945 and 1946 the number of children legitimized in Australia was 942 and 943 respectively, compared with 883 in 1939.

13. **Multiple Births.**—Among the total number of 176,379 live births registered in Australia in 1946, there were 172,392 single births, 3,917 twins and 70 triplets. The number of cases of twins was 2,014 and of triplets 25, there being 111 still-born twins and 5 still born triplets. The total number of mothers was, therefore, 174,431, the proportion of mothers of twins being one in every 86, of mothers of triplets one in every 6,977, and of mothers of all multiple births one in every 86 mothers. Multiple births occurred in 1.17 per cent. of confinements.

The proportion of multiple births to total births does not vary greatly from year to year and exhibits no tendency towards increase or decrease :—

MULTIPLE BIRTHS : AUSTRALIA.

Particulars.	Annual Averages—			1943.	1944.	1945.	1946.
	1911–20.	1921–30.	1931–40.				
Mothers of Multiple Births ..	1,387	1,420	1,220	1,627	1,796	1,803	2,039
Percentage on Total Mothers ..	1.06	1.07	1.06	1.10	1.18	1.14	1.17

14. **Ages of Parents.**—The relative ages of the parents of children registered in 1945 and 1946 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births the relative single ages of parents are shown in *Demography Bulletin*, Nos. 63 and 64. In the

present work the exigencies of space allow only the insertion of a table for 1946 showing the relative ages of parents in respect of all confinements in groups of five years :—

ALL CONFINEMENTS : RELATIVE AGES OF PARENTS, AUSTRALIA, 1946.

Age of Father (Years), and Type of Birth.		Total.	Age of Mother (Years).								
			Under 15.	15–19.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and over.	Not Stated
Under 20	Single	1,035	..	721	295	17	2	..	..	..	..
	Twins	9	..	6	2	1	..	..	..	..	..
20–24 ..	Single	21,806	1	3,435	15,523	2,633	190	24	..	..	..
	Twins	195	..	20	143	29	2	1	..	..	..
	Triplets	5	..	..	4	1	..	..	..	..	..
25–29 ..	Single	46,916	..	1,291	19,696	22,105	3,445	353	21	5	..
	Twins	473	..	7	186	228	48	4	..	..	..
	Triplets	7	..	1	1	3	2	..	..	..	..
30–34 ..	Single	43,898	..	383	6,042	18,774	16,211	2,334	151	3	..
	Twins	554	..	1	53	227	227	43	3	..	..
	Triplets	6	..	..	..	2	3	1	..	..	..
35–39 ..	Single	29,175	..	96	1,579	6,137	12,263	8,260	827	13	..
	Twins	426	..	..	17	82	173	138	16	..	..
	Triplets	4	..	..	..	1	3	..	..	..	..
40–44 ..	Single	14,270	1	23	421	1,617	4,093	5,780	2,272	63	..
	Twins	171	..	..	2	14	48	72	35	..	..
	Triplets	2	..	..	..	..	..	1	1	..	..
45–49 ..	Single	5,369	..	6	126	457	1,124	2,031	1,419	206	..
	Twins	89	..	..	2	10	20	30	26	1	..
50–54 ..	Single	1,608	..	5	38	103	328	569	475	90	..
	Twins	26	..	..	1	3	4	13	5	..	..
55–59 ..	Single	558	..	2	11	46	108	191	155	45	..
	Twins	9	..	..	1	1	1	4	1	1	..
60–64 ..	Single	167	..	..	5	11	32	53	54	12	..
	Twins	3	..	..	..	..	..	2	..	1	..
65 and over	Single	88	..	1	1	13	23	22	20	8	..
	Twins	1	..	..	..	..	1	..	..	..	..
Not Stated Twins		2	..	..	2	..	..	..	..	..	..
Mothers of Nuptial Children	Single	164,890	2	5,963	43,737	51,913	37,819	19,617	5,394	445	..
	Twins	1,958	..	34	409	595	524	307	86	3	..
	Triplets	24	..	1	5	7	8	2	1	..	..
	Total	166,872	2	5,998	44,151	52,515	38,351	19,926	5,481	448	..
Mothers of Ex-nuptial Children	Single	7,502	22	1,692	2,751	1,409	877	542	184	24	1
	Twins	56	..	8	11	14	13	8	2	..	..
	Triplets	1	..	..	..	1	..	..	..	..	..
	Total	7,559	22	1,700	2,762	1,424	890	550	186	24	1
Total Mothers	Single	172,392	24	7,655	46,488	53,322	38,696	20,159	5,578	469	1
	Twins	2,014	..	42	420	609	537	315	88	3	..
	Triplets	25	..	1	5	8	8	2	1	..	..
Total ..		174,431	24	7,698	46,913	53,939	39,241	20,476	5,667	472	1

15. **Birthplaces of Parents.**—A table showing birthplaces of parents of children whose births were registered during 1946 appears in *Demography Bulletin*, No. 64.

16. **Occupation of Fathers.**—A table showing occupations of the fathers of all nuptial children registered in 1946 appears in *Demography Bulletin*, No. 64.

17. **Age, Duration of Marriage and Issue of Mothers.**—(i) *General.* The total number of nuptial confinements resulting in live births in 1946 was 166,872, comprising 164,890 single births, 1,958 cases of twins and 24 cases of triplets. The tables exclude the previous issue of former marriages and still-born children. On the other hand, they include children by the same father which were born to the mother prior to the marriage. Children born during the current year are included in the total issue shown.

The tables are shown in summarized form, more complete details being given in *Demography Bulletin*, No. 64.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to 31 years, and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1946 was 2.35 compared with 2.40 in 1945, 2.41 in 1944, 2.34 in 1943, and 2.38 in 1942.

NUPTIAL CONFINEMENTS : DURATION OF MARRIAGE AND ISSUE OF MOTHERS, AUSTRALIA, 1946.

Duration of Marriage. (Years.)	Total Married Mothers.	Total Issue.	Average Issue.
0–1 ..	21,155	21,395	1.01
1–2 ..	18,613	21,068	1.13
2–3 ..	17,345	25,967	1.50
3–4 ..	17,571	31,122	1.77
4–5 ..	17,186	34,843	2.03
5–6 ..	14,230	33,062	2.32
6–7 ..	12,027	31,172	2.59
7–8 ..	8,841	25,683	2.90
8–9 ..	7,528	24,006	3.19
9–10 ..	6,201	21,193	3.42
10–11 ..	5,218	18,970	3.64
11–12 ..	4,246	16,555	3.90
12–13 ..	3,398	14,373	4.23
13–14 ..	2,769	12,448	4.50
14–15 ..	2,045	9,774	4.78
15–16 ..	1,741	8,867	5.09
16–17 ..	1,554	8,265	5.32
17–18 ..	1,340	7,549	5.63
18–19 ..	1,141	6,678	5.85
19–20 ..	844	5,382	6.38
20–21 ..	588	3,926	6.68
21–22 ..	428	3,045	7.11
22–23 ..	336	2,446	7.28
23–24 ..	216	1,669	7.73
24–25 ..	129	1,094	8.48
25–26 ..	98	922	9.41
26–27 ..	42	384	9.14
27–28 ..	25	250	10.00
28–29 ..	9	93	10.33
29–30 ..	6	56	9.33
30–31 ..	2	22	11.00
Total ..	166,872	392,279	2.35

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother, but with the increase of the age of the mother the number of issue has fallen in comparison with past years. The average issue of mothers of all ages recorded for 1946 (namely 2.35) is 27.7 per cent. below the average of 3.25 for the years 1911–20.

AGE AND AVERAGE ISSUE OF MOTHERS : AUSTRALIA.

Period.	Age of Mothers (Years). Under 20.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and Over.	All Ages.
1911–20 ..	1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25
1921–30 ..	1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04
1931–40 ..	1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71
1937 ..	1.19	1.64	2.22	3.08	4.34	5.86	7.56	2.60
1938 ..	1.20	1.64	2.18	2.99	4.23	5.70	7.38	2.54
1939 ..	1.19	1.63	2.15	2.95	4.10	5.62	6.97	2.48
1940 ..	1.21	1.61	2.13	2.87	4.02	5.47	6.92	2.44
1941 ..	1.19	1.58	2.10	2.85	3.90	5.34	7.01	2.39
1942 ..	1.18	1.56	2.11	2.84	3.84	5.25	6.83	2.38
1943 ..	1.17	1.52	2.08	2.80	3.73	5.05	6.86	2.34
1944 ..	1.17	1.55	2.14	2.82	3.67	4.87	6.18	2.41
1945 ..	1.15	1.55	2.14	2.83	3.62	4.81	6.17	2.40
1946 ..	1.15	1.53	2.12	2.80	3.59	4.59	6.03	2.35

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers of various ages according to previous issue is given for 1946 in the following table. Corresponding figures for 1945 appear in *Demography Bulletin*, No. 63 :—

NUPTIAL CONFINEMENTS : MOTHERS OF VARIOUS AGES ACCORDING TO PREVIOUS ISSUE, AUSTRALIA, 1946.*

Previous Issue.	Age of Mothers (Years.)							Total Married Mothers.
	Under 20.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and Over.	
0	5,190	27,131	18,980	8,170	3,003	639	32	63,145
1	728	12,247	18,500	11,585	4,172	768	40	48,040
2	80	3,568	8,872	8,864	4,469	948	46	26,847
3	1	921	3,615	4,701	3,170	819	62	13,280
4	1	237	1,547	2,303	1,844	631	49	6,612
5	..	40	652	1,330	1,153	455	43	3,673
6	..	6	260	667	781	337	33	2,084
7	..	1	67	401	508	276	39	1,292
8	..	..	15	181	341	209	27	773
9	..	..	4	90	219	163	20	496
10	..	..	3	38	157	100	20	318
11	..	..	..	15	64	64	14	157
12	..	..	..	4	25	30	11	70
13	..	..	..	1	12	18	4	35
14	..	..	..	1	7	15	4	27
15	..	..	..	..	1	6	1	8
16	..	..	..	..	..	2	3	5
17	..	..	..	..	..	1	..	1
Total Married Mothers	6,000	44,151	52,515	38,351	19,926	5,481	448	166,872

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of married mothers of twins in 1946 show that 630 mothers had no previous issue either living or deceased, 548 had one child previously, 359 had two previous issue, 177 three, 90 four, 65 five, 27 six, 20 seven, 12 eight, 10 nine, 12 ten, 3 eleven, 2 twelve, 2 thirteen and 1 fourteen previous issue.

Of the 24 cases of nuptial triplets registered during 1946, 6 mothers had no previous issue, 7 had one, 6 had two, 2 had three and 3 had four previous issue.

18. Interval Between Marriage and First Birth.—(i) *Interval.* The following table shows the interval between marriage and first birth for 1911–20, 1921–30, 1931–40, 1943, 1944, 1945 and 1946. Twins and triplets are included, the eldest only being enumerated.

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH : AUSTRALIA.

Interval.	Annual Averages.			1943.	1944.	1945.	1946
	1911–20.	1921–30.	1931–40.				
NUMBER OF FIRST BIRTHS.							
Under 1 month ..	465	365	301	225	186	178	190
1 month ..	535	496	412	260	261	233	275
2 months ..	760	719	626	418	345	356	409
3 " ..	996	1,013	967	576	487	474	647
4 " ..	1,227	1,333	1,367	877	734	750	948
5 " ..	1,551	1,809	2,008	1,218	1,237	1,160	1,430
6 " ..	1,993	2,397	2,812	1,911	1,753	1,928	2,235
7 " ..	1,785	2,219	2,184	1,813	1,563	1,752	2,241
8 " ..	1,562	1,530	1,417	2,029	1,816	1,990	2,258
9 " ..	3,517	3,253	2,668	3,891	3,608	4,312	4,460
10 " ..	2,877	2,907	2,202	3,448	2,507	2,766	3,213
11 " ..	2,018	2,152	1,836	2,994	2,188	2,171	2,668
Total under 1 year	19,286	20,193	18,800	19,660	16,685	18,070	20,974
1–2 years ..	8,563	10,133	10,595	19,737	16,227	15,104	16,254
2–3 " ..	2,626	3,369	4,319	8,343	9,094	9,136	9,262
3–4 " ..	1,230	1,743	2,214	4,468	4,586	5,710	6,237
4–5 " ..	700	941	1,205	2,014	2,586	3,080	4,271
5–9 " ..	980	1,446	1,766	3,087	3,496	4,087	5,417
10–14 " ..	168	240	289	406	443	473	632
15–19 " ..	34	47	48	75	85	99	81
20 years and over ..	8	8	7	12	13	10	17
Total	33,595	38,120	39,243	57,802	(a) 53,215	55,769	63,145

(*a*) Excludes 1 birth, duration of marriage not stated.

Interval.	1911–20.	1921–30.	1931–40.	1943.	1944.	1945.	1946
PERCENTAGE OF TOTAL FIRST BIRTHS.							
	%	%	%	%	%	%	%
Under 1 month ..	1.39	0.96	0.77	0.39	0.35	0.32	0.30
1 month ..	1.59	1.30	1.05	0.45	0.49	0.42	0.44
2 months ..	2.26	1.89	1.59	0.72	0.65	0.64	0.65
3 " ..	2.96	2.66	2.46	1.00	0.92	0.85	1.02
4 " ..	3.65	3.50	3.48	1.52	1.38	1.34	1.50
5 " ..	4.62	4.75	5.12	2.11	2.32	2.08	2.26
6 " ..	5.93	6.29	7.16	3.30	3.29	3.46	3.54
7 " ..	5.32	5.82	5.57	3.14	2.94	3.14	3.55
8 " ..	4.65	4.01	3.61	3.51	3.41	3.57	3.58
9 " ..	10.47	8.53	6.80	6.73	6.78	7.73	7.06
10 " ..	8.56	7.63	5.61	5.96	4.71	4.96	5.09
11 " ..	6.01	5.64	4.68	5.18	4.11	3.89	4.22
Total under 1 year	57.41	52.98	47.90	34.01	31.35	32.40	33.21
1–2 years ..	25.49	26.58	27.00	34.15	30.49	27.08	25.74
2–3 " ..	7.82	8.84	11.01	14.43	17.09	16.38	14.67
3–4 " ..	3.66	4.57	5.64	7.73	8.62	10.24	9.88
4–5 " ..	2.08	2.47	3.07	3.49	4.86	5.52	6.76
5–9 " ..	2.92	3.79	4.50	5.34	6.57	7.33	8.58
10–14 " ..	0.50	0.63	0.74	0.70	0.83	0.85	1.00
15–19 " ..	0.10	0.12	0.12	0.13	0.16	0.18	0.13
20 years and over ..	0.02	0.02	0.02	0.02	0.03	0.02	0.03
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The masculinity of first births in 1946 was 106.46 compared with 106.51 for total births.

(ii) *Age of Mother and Interval.* Previous issue of mothers of ex-nuptial children is not recorded and for purposes of the following table all ex-nuptial births are regarded as first births. The table shows in condensed form for 1944, 1945 and 1946 the numbers of births of ex-nuptial children, of children born less than nine months after marriage and of all first-born children according to the age of mothers. Over the past few years about one-quarter of all first births were either ex-nuptial or occurred less than nine months after marriage. Of the first-born children of mothers under 20 years, however, over two-thirds came into this category. The percentage diminishes rapidly to about 15 per cent. for mothers aged 25 to 34 years and then rises perceptibly for mothers in older age-groups.

It must be remembered, of course, that a certain number of premature births is unavoidably included among the births which took place less than nine months after marriage, and they are not necessarily due to ante-nuptial conception. However, information in connexion therewith is not available and the figures in the table must be accepted with this reservation. Tabulations showing single ages of mothers of nuptial first-born children and interval after marriage are given for 1944, 1945 and 1946 in *Demography Bulletin*, Nos. 62 to 64, respectively.

AGE OF MOTHER AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH : AUSTRALIA.

Particulars.	Age of Mother at Birth of First Child (Years).							Total.
	Under 20.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and Over.	
1944—								
Ex-nuptial births (*a*) No.	1,670	2,492	1,281	777	462	145	15	(*b*) 6,842
Nuptial births occurring less than 9 months after marriage .. .. No.	2,582	4,066	1,106	418	162	43	5	8,382
Total .. No.	4,252	6,558	2,387	1,195	624	188	20	15,224
Total first births No.	6,171	24,854	17,332	7,994	2,960	699	48	60,058
1945—								
Ex-nuptial births (*a*) No.	1,673	2,648	1,336	808	469	167	20	(*c*) 7,121
Nuptial births occurring less than 9 months after marriage .. .. No.	2,689	4,259	1,184	456	187	45	1	8,821
Total .. No.	4,362	6,907	2,520	1,264	656	212	21	15,942
Total first births No.	6,396	26,385	17,930	8,197	3,179	755	48	62,890
1946—								
Ex-nuptial births (*a*) No.	1,722	2,762	1,424	890	550	186	24	(*d*) 7,558
Nuptial births occurring less than 9 months after marriage .. .. No.	3,070	5,202	1,520	553	229	53	6	10,633
Total .. No.	4,792	7,964	2,944	1,443	779	239	30	18,191
Total first births No.	6,912	29,893	20,404	9,060	3,553	825	56	70,703
Percentage of (i) ex-nuptial births plus (ii) nuptial births occurring less than 9 months after marriage on (iii) total first births—								
1911–20 .. %	81.22	49.37	28.37	25.50	30.89	37.01	49.49	43.70
1921–30 .. %	80.08	45.59	23.45	22.22	29.78	38.18	49.65	40.76
1931–40 .. %	80.06	44.75	20.49	19.41	27.78	38.43	55.57	39.32
1941 .. %	73.01	32.31	14.50	14.50	21.21	32.53	60.98	28.59
1942 .. %	69.80	29.80	13.85	15.69	21.02	30.50	46.34	27.22
1943 .. %	67.03	25.44	13.43	14.31	21.33	30.67	55.81	24.55
1944 .. %	68.90	26.39	13.77	14.95	21.09	26.90	41.67	25.35
1945 .. %	68.20	26.18	14.05	15.42	20.64	28.08	43.75	25.31
1946 .. %	69.33	26.64	14.43	15.93	21.93	28.97	53.57	25.73

(*a*) For purposes of this table all ex-nuptial births are regarded as first births. (*b*) Excludes 3 births, age of mother not stated. (*c*) Excludes 5 births, age of mother not stated. (*d*) Excludes 1 birth, age of mother not stated.

NOTE.—In cases of multiple first births, only one child is included.

19. **Interval between Birth and Registration of Birth.**—Detailed information for the years 1911 to 1921 regarding the period which elapsed between birth and registration of birth is contained in *Demography Bulletins* issued by this Bureau for those years. The average interval for 1921 was over 14 days for all children.

20. **Still-births.**—Reliable statistics of the number of children born dead in Australia are not available as registration of these births is not compulsory in all States. In previous issues of the Year Book estimated numbers of still-births have been given. Pending the results of investigations being made into the records of such births which may affect the accuracy of these estimates, figures for 1945 and 1946 are not available.

§ 3. Mortality.

1. **Number of Deaths.**—(i) *Year*, 1946. The following table shows the number of deaths, male and female, registered in each State during the year :—

DEATHS, 1946.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	16,038	11,280	6,206	3,483	2,791	1,395	46	44	41,283
Females ..	12,541	10,254	4,442	2,978	1,962	1,154	9	38	33,378
Persons ..	28,579	21,534	10,648	6,461	4,753	2,549	55	82	74,661

(ii) *Years* 1861 *to* 1946. A summary of the total number of deaths in each State and Territory since 1861 is given in the following table :—

DEATHS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	6,312	9,890	1,150	2,168	279	1,391	..	..	21,190
1866–1870	7,293	11,027	1,863	2,593	350	1,390	..	..	24,516
1871–1875	8,182	11,952	2,574	3,095	414	1,609	..	..	27,826
1876–1880	10,651	12,562	3,457	3,605	401	1,799	..	..	32,475
1881–1885	13,221	13,362	5,146	4,323	544	1,958	..	..	38,554
1886–1890	14,291	16,929	5,608	3,873	666	2,078	..	..	43,445
1891–1895	15,360	16,411	5,316	4,109	1,086	2,025	..	..	44,307
1896–1900	15,556	16,265	5,841	4,235	2,389	2,063	..	..	46,349
1901–1905	15,900	15,349	5,862	3,913	2,731	1,932	(*a*) 70	..	45,757
1906–1910	15,882	14,942	5,529	3,848	2,867	2,020	77	..	45,165
1911–1915	18,802	15,921	6,907	4,495	3,045	2,010	75	(*b*) 12	51,267
1916–1920	20,776	16,485	7,605	4,878	3,133	1,971	81	10	54,939
1921–1925	20,379	16,176	7,412	4,880	3,231	2,090	57	9	54,234
1926–1930	22,677	16,698	8,007	5,008	3,617	2,040	71	42	58,160
1931–1935	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936–1940 *c*	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941–1945 *c*	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
Year—									
1942(*c*) ..	29,219	21,973	9,622	6,712	5,076	2,430	83	76	75,191
1943(*c*) ..	28,870	21,327	10,576	6,482	4,587	2,527	49	68	74,486
1944(*c*) ..	26,652	20,502	9,385	5,984	4,478	2,494	31	70	69,596
1945(*c*) ..	26,994	20,496	9,459	6,049	4,712	2,413	35	73	70,231
1946(*c*) ..	28,579	21,534	10,648	6,461	4,753	2,549	55	82	74,661

(*a*) Northern Territory figures included with South Australia prior to 1901. (*b*) Part of New South Wales prior to 1911. (*c*) Excludes deaths of defence personnel and of internees and prisoners of war from overseas.

2. **Crude Death-rates.**—The commonest measure of mortality is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death-rate. This rate for a given period measures the numbers per thousand of population by which the population is depleted through deaths during that period. Crude death-rates for each State and Territory from 1861 to 1946 are shown in the following table :—

CRUDE DEATH-RATES.(*a*)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust
Annual Average—									
1861–1865 ..	16.88	17.48	20.60	15.39	15.15	15.30	..	..	17.04
1866–1870 ..	16.18	16.68	18.51	14.90	14.90	14.24	..	..	16.26
1871–1875 ..	14.93	15.58	18.33	15.71	15.90	15.58	..	..	15.62
1876–1880 ..	16.18	15.26	17.84	14.78	14.12	16.54	..	..	15.80
1881–1885 ..	15.77	14.76	19.36	14.60	16.96	16.03	..	..	15.69
1886–1890 ..	13.91	16.10	15.72	12.46	15.63	15.22	..	..	14.85
1891–1895 ..	12.91	13.85	12.81	12.17	16.29	13.44	..	..	13.32
1896–1900 ..	11.91	13.73	12.45	11.93	15.59	12.46	..	..	12.75
1901–1905 ..	11.25	12.74	11.38	10.96	12.58	10.79	(*b*)15.69	..	11.76
1906–1910 ..	10.11	12.01	9.90	10.16	11.03	10.77	20.99	..	10.75
1911–1915 ..	10.47	11.49	10.55	10.37	9.87	10.39	20.38	(*c*) 5.21	10.73
1916–1920 ..	10.58	11.38	10.75	10.65	9.91	9.83	17.41	4.26	10.77
1921–1925 ..	9.26	10.08	9.31	9.45	9.19	9.70	15.00	2.61	9.53
1926–1930 ..	9.26	9.56	9.06	8.83	8.90	9.44	15.84	5.49	9.26
1931–1935(*d*) ..	8.68	9.72	8.61	8.72	8.82	9.62	13.45	3.81	9.00
1936–1940(*d*)(*e*) ..	9.45	10.36	9.08	9.33	9.21	9.91	11.74	4.50	9.62
1941–1945(*d*)(*e*) ..	9.73	10.63	9.24	10.27	9.86	10.21	6.52	4.98	9.96
Year—									
1942(*d*)(*e*) ..	10.32	11.21	9.29	11.02	10.65	10.08	9.29	5.34	10.48
1943(*d*)(*e*) ..	10.10	10.81	10.10	10.57	9.62	10.40	5.12	4.99	10.36
1944(*d*)(*e*) ..	9.23	10.30	8.84	9.66	9.30	10.15	2.97	4.93	9.52
1945(*d*)(*e*) ..	9.25	10.21	8.79	9.64	9.66	9.71	3.33	4.86	9.50
1946(*d*)(*e*)—									
Males ..	10.90	11.28	11.09	11.06	11.02	11.00	6.36	5.15	11.03
Females ..	8.51	10.00	8.37	9.29	8.18	9.20	2.70	5.17	8.96
Persons ..	9.70	10.63	9.77	10.17	9.61	10.11	5.21	5.16	10.00

(*a*) Number of deaths per 1,000 of mean population. (*b*) Northern Territory figures included with South Australia prior to 1901. (*c*) Part of New South Wales prior to 1911. (*d*) Revised rates based on mean populations adjusted in accordance with the preliminary results of the Census of 30th June, 1947. (*e*) Excludes deaths of defence personnel and of internees and prisoners of war from overseas.

3. **Standardized Death-rates.**—(i) *General.* The death-rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death-rate of a community will be low if it contains a large percentage of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death-rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death-rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death-rate if the death-rates in each sex and age-group were as recorded, but the age and sex distribution the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their Censuses nearest to the year 1900. Full details of the "Standard Population" are given in Official Year Book No. 22, p. 962.

(ii) *Death-rates in Age-groups.* The following table provides a comparison of death-rates in age-groups in each State for the latest Census year (1933) in which the ages of population in each State were accurately ascertained.

DEATH-RATES(*a*) IN AGE-GROUPS, 1933.

Age-group (years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Under 1 ..	41.03	43.52	45.64	34.04	38.25	43.28	75.27	43.48	41.72
1–4 ..	3.70	3.78	4.29	2.72	3.46	3.99	2.73	1.23	3.72
5–14 ..	1.08	1.21	1.24	0.96	1.31	1.67	..	0.55	1.16
15–24 ..	1.74	1.82	2.01	1.72	1.69	2.41	4.34	0.68	1.82
25–34 ..	2.50	2.76	3.10	2.65	2.99	3.47	4.30	0.63	2.74
35–44 ..	4.27	4.02	5.06	3.76	4.76	4.98	7.94	4.49	4.32
45–54 ..	8.43	8.10	8.69	7.27	10.03	8.11	9.71	6.19	8.36
55–64 ..	18.07	18.88	18.09	15.99	19.34	15.80	30.15	11.19	18.15
65 and over	64.78	62.85	66.87	61.18	60.49	65.43	77.47	40.91	63.85
Crude Death rate (all ages) ..	8.58	9.59	8.84	8.44	8.64	9.60	12.55	4.19	8.92

(*a*) Number of deaths per 1,000 of mean population at ages shown.

It will be observed that in this particular year, while the crude death-rates for Victoria and Tasmania were substantially higher than in other States, the rates at individual ages were lower than for Queensland and not appreciably higher than in New South Wales or Western Australia.

(iii) *Comparison of Crude and Standardized Death-rates.* The relative incidence of mortality as between individual States and as between the years 1921 and 1933 is illustrated in the following statement of crude and "standardized" death-rates. These years have been chosen for comparisons because the Census data give essential information as to sexes and ages of the State population. Crude death-rates are shown to indicate the degree to which they disguise the true position.

CRUDE AND STANDARDIZED DEATH-RATES.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Crude Death-rate(*a*)—							
1921	9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933	8.58	9.59	8.84	8.44	8.64	9.60	8.92
Standardized Death-rate(*b*)—							
1921	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933	8.52	8.74	9.10	7.66	8.74	8.86	8.62

(*a*) Total deaths per 1,000 of mean population. (*b*) See explanation of standardized death-rates in par. 3 (i) above.

The above comparisons relate to individual years which happened to be Census years and should not be used as the bases for general conclusions as to changes in incidence of mortality for other than those years.

(iv) *Standardized Death-rates, Australia,* 1933 *to* 1941. It is not possible to continue the index of mortality formerly published. As indicated in letterpress previously published the index of mortality was an unsatisfactory basis for comparison. The more reliable standardized death-rates for Australia for 1933 and later years were as follows :—1933, 8.62 ; 1934, 8.92 ; 1935, 8.83 ; 1936, 8.70 ; 1937, 8.58 ; 1938, 8.59 ; 1939, 8.73 ; 1940, 8.51 ; and 1941, 8.55. Rates for later years have not been calculated as it has been impossible to obtain a satisfactory estimate of the age distribution of the population. Rates will be calculated for 1947 when the final Census results are available.

4. **True Death-rates.**—The main objections to standardized death-rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. A correct measurement of the mortality of the

population can be obtained, however, from life tables. A life table represents the number of survivors at each age from an original batch of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death-rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in the standard population one person in 50 or 20 per thousand will die each year. The true death-rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survivorship from each year of age to the next. The table below sets out complete expectation of life at birth and true death-rates for the periods covered by Australian life tables.

COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH-RATES : AUSTRALIA.

Period.	Complete Expectation of Life at Birth.		True Death-rate.	
	Males.	Females.	Males.(*a*)	Females.(*b*)
	Years.	Years.		
1881–1890	47.20	50.84	21.19	19.67
1891–1900	51.08	54.76	19.58	18.26
1901–10	55.20	58.84	18.12	17.00
1920–22	59.15	63.31	16.91	15.80
1932–34	63.48	67.14	15.75	14.89

(*a*) Number of deaths per 1,000 males in life tables or stationary population. (*b*) Number of deaths per 1,000 females in life table or stationary population.

5. **Crude Death-rates of Various Countries.**—The following table gives the crude death-rate for Australia and each State thereof in comparison with the rates for various other countries. Figures for the years 1940 to 1945 inclusive are not shown as they are based on population estimates whose comparability is open to doubt because of the abnormal distribution of population during war-time.

CRUDE DEATH-RATES (*a*) : VARIOUS COUNTRIES.

Country.	1908–13.	1921–25.	1926–30.	1931–35.	1946.
Netherlands	13.9	10.4	9.9	8.9	8.5
Union of South Africa (*b*)	(*c*) 10.3	9.7	9.7	9.8	8.7
Norway	13.6	11.5	11.0	10.4	9.2
Canada	(*d*)	11.2	11.1	9.7	9.4
New Zealand (*e*)	9.3	8.6	8.6	8.2	9.7
Australia (*f*)	**10.7**	**9.5**	**9.3**	**9.0**	**10.0**
Western Australia (f)	10.3	9.2	9.1	8.8	9.6
New South Wales (f)	10.3	9.3	9.4	8.7	9.7
Queensland (f)	10.3	9.2	8.6	8.6	9.8
Tasmania (f)	10.7	9.8	9.6	9.6	10.1
South Australia (f)	10.1	9.4	8.7	8.7	10.2
Victoria (f)	11.7	10.1	9.6	9.7	10.6
United States of America	(*c*) 14.1	11.8	11.8	(*g*) 10.9	10.0
Denmark	13.2	11.3	11.1	10.9	10.2
Sweden	14.0	12.1	12.1	11.6	10.5
Argentine	17.5	14.4	13.3	12.1	(*h*) 10.8
Switzerland	15.2	12.5	12.1	11.8	11.3
Great Britain and Northern Ireland ..	14.5	12.4	12.3	12.2	11.6
England and Wales	14.1	12.2	12.1	12.0	11.5
Northern Ireland	16.9	15.6	14.8	14.3	12.5
Scotland	15.5	13.9	13.6	13.2	13.1
Finland	16.4	15.1	14.8	13.3	11.6
Italy	20.4	17.4	16.0	14.1	11.9

(*a*) Number of deaths per 1,000 mean population. (*b*) White population only. (*c*) 1911–13. (*d*) Not available. (*e*) Excluding Maoris. (*f*) Excluding full-blood aboriginals. (*g*) 1933–35. (*h*) 1945.

CRUDE DEATH-RATES (*a*): VARIOUS COUNTRIES—*continued.*

Country.	1908–13.	1921–25.	1926–30.	1931–35.	1946.
Germany	16.5	13.3	11.8	11.2	(*h*) 12.4
Spain	22.8	20.2	17.9	16.4	12.9
Greece	(*c*)	16.5	16.6	16.5	(*c*)
France	18.6	17.2	16.8	15.7	13.3
Belgium	15.7	13.4	13.7	12.9	13.4
Czechoslovakia	21.0	16.1	15.3	13.8	13.7
Poland	21.0	18.5	16.8	14.7	(*e*) 13.9
Eire	16.9	14.6	14.4	14.0	14.0
Hungary	(*b*) 22.9	19.9	17.0	15.8	14.1
Portugal	(*b*) 20.9	20.4	18.4	16.9	14.7
Yugoslavia	(*c*)	20.2	20.0	17.9	(*f*) 15.0
Chile	(*b*) 31.0	30.3	25.8	24.4	17.2
Japan	20.5	21.8	19.3	17.9	17.6
Rumania	24.7	23.0	21.2	20.6	18.0
Mexico	(*c*)	(*d*) 25.5	25.6	24.8	18.7
Ceylon	31.4	27.8	25.1	24.7	(*h*) 21.3
Egypt	25.8	25.4	26.2	27.4	(*g*) 28.6

(*a*) Number of deaths per 1,000 mean population. (*b*) 1911–13. (*c*) Not available. (*d*) 1922–25. (*e*) 1938. (*f*) 1939. (*g*) 1942. (*h*) 1943.

6. **True Death-rates of Various Countries.**—The following table gives the true death-rate for Australia in comparison with the rates for various other countries :—

TRUE DEATH-RATES : VARIOUS COUNTRIES.

Country.	Period.	True Death-rate.		Country.	Period.	True Death-rate.	
		Males. (*a*)	Females. (*b*)			Males. (*a*)	Females. (*b*)
Netherlands	1931–40	15.2	14.9	Belgium	1928–32	17.9	16.7
New Zealand(*c*)	1934–38	15.3	14.6	Scotland	1930–32	17.9	16.8
Sweden	1936–40	15.6	14.9				
Denmark	1936–40	15.8	15.2	Northern Ireland	1925–27	18.0	17.8
Australia (*d*)	**1932–34**	**15.8**	**14.9**	Austria	1930–33	18.4	17.1
				Finland	1931–40	18.4	16.8
United States of America(*e*)	1939–41	15.9	14.9	France	1928–33	18.4	16.9
Norway	1930–31	16.4	15.7	Italy	1930–32	18.6	17.9
Switzerland	1933–37	16.5	15.5	Czechoslovakia	1929–32	19.3	18.1
				Greece	1928	20.4	19.7
England and Wales	1937	16.6	15.5	Hungary	1930–31	20.7	19.5
Germany	1932–34	16.7	15.9	Poland	1931–32	20.8	19.5
Eire	1940–42	17.0	16.4	Japan	1935–36	21.3	20.2
Canada	1930–32	17.0	16.5				
Union of South Africa (*e*)	1935–37	17.0	15.9	U.S.S.R. (Europe)	1926–27	23.9	21.4

(*a*) Number of deaths per 1,000 males in life table or stationary population (*see* explanation on page 769). (*b*) Number of deaths per 1,000 females in life table or stationary population (*see* explanation on page 769). (*c*) Excluding Maoris. (*d*) Excluding full-blood aboriginals. (*e*) White population only.

7. **Australian Life Tables.**—Official Year Book No. 20, pp. 962 and 969–73, contains a synopsis of the various Australian life tables and comparisons with other countries of the expectation of life at various ages. In connexion with the Census of 1933, life

tables have been constructed in respect of each sex for Australia as a whole, and these, together with monetary tables on single and joint lives based thereon, have been published as separate Census publications. A specially contributed article by F. W. Barford, M.A., A.I.A., on the results of the tables for single lives appears in Official Year Book, No. 29, p. 928.

8. **Infantile Deaths and Death-rates.**—(i) *Australia*, 1901 *to* 1946. The universal experience that during the first few years of life the higher death-rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 398,347 male infants born from 1942 to 1946, 14,502 (36.41 per 1,000) died during the first year of life, while of 377,939 female infants only 10,950 (28.97 per 1,000) died during the first year. Still-births are not included in any of the tables relating to deaths.

INFANTILE DEATHS AND DEATH-RATES : AUSTRALIA.

Period.	Number of deaths under one year.			Rate of Infantile Mortality.(*a*)		
	Males.	Females.	Total.	Males.	Females.	Total.
Annual Average—						
1901–05 ..	5,499	4,448	9,947	104.25	88.83	96.91
1906–10 ..	4,881	3,821	8,702	84.78	70.02	77.61
1911–15 ..	5,274	4,063	9,337	77.65	62.65	70.32
1916–20 ..	4,757	3,597	8,354	71.63	57.31	64.67
1921–25 ..	4,474	3,394	7,868	64.23	51.21	57.88
1926–30 ..	3,909	2,942	6,851	57.66	45.99	51.99
1931–35 ..	2,649	1,986	4,635	46.00	36.29	41.27
1936–40 ..	2,679	2,016	4,695	43.23	34.16	38.81
1941–45 ..	2,921	2,215	5,136	39.11	31.18	35.24
1942 ..	3,096	2,304	5,400	44.09	34.66	39.50
1943 ..	3,071	2,342	5,413	40.22	32.11	36.26
1944 ..	2,728	2,078	4,806	34.82	27.71	31.34
1945 ..	2,685	2,032	4,717	32.56	26.02	29.38
1946 ..	2,922	2,194	5,116	32.12	25.60	29.01

(*a*) Number of deaths under 1 year per 1,000 live births registered.

(ii) *States*, 1901 *to* 1946. For each State and Territory the rates of infantile mortality during the period 1901 to 1946 were as follows :—

INFANTILE MORTALITY RATES (*a*) : UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901–05..	97.02	95.91	94.35	86.70	124.79	90.00	149.35	(*b*)	96.91
1906–10..	77.30	79.90	71.27	68.38	89.80	83.18	143.79	(*b*)	77.61
1911–15..	71.05	72.23	65.68	67.26	72.43	70.91	85.11	32.56	70.32
1916–20..	64.82	67.18	63.04	61.93	61.73	63.84	67.15	40.40	64.67
1921–25..	58.11	61.93	50.99	54.19	59.14	60.44	40.82	60.24	57.88
1926–30..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
1931–35..	41.92	42.76	39.46	35.12	40.81	44.47	80.60	*c*34.48	41.27
1936–40..	41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941–45..	36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1942 ..	40.19	41.67	34.77	39.72	36.86	42.41	43.48	22.96	39.50
1943 ..	36.18	35.76	37.79	36.67	32.63	40.56	75.00	18.62	36.26
1944 ..	30.68	31.96	31.32	29.07	32.57	38.27	22.47	23.44	31.34
1945 ..	30.63	28.03	29.76	28.08	29.52	27.48	55.56	12.35	29.38
1946 ..	30.22	27.16	29.27	27.07	31.06	30.23	30.30	19.31	29.01

(*a*) Number of deaths under 1 year per 1,000 live births registered. (*b*) Part of New South Wales prior to 1911. (*c*) Based on deaths of infants born in the Australian Capital Territory. *See* footnote page 755.

INFANTILE MORTALITY RATES (*a*): UNDER ONE MONTH.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901–05 ..	33.11	34.49	32.13	30.73	37.09	33.54	(*b*)	(*c*)	33.46
1906–10 ..	31.47	32.45	30.87	26.83	30.74	29.17	(*b*)	(*c*)	31.10
1911–15 ..	31.75	33.07	30.73	29.07	30.87	32.68	38.30	23.26	31.69
1916–20 ..	32.12	33.57	29.62	29.43	29.43	31.48	40.77	35.35	31.70
1921–25 ..	29.97	32.19	27.44	27.83	27.56	31.73	11.66	18.07	29.91
1926–30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
1931–35 ..	27.62	27.78	27.91	22.99	25.11	30.09	35.26	*d*23.45	27.27
1936–40 ..	27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.19
1941–45 ..	24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1942 ..	25.49	27.75	25.32	20.39	20.70	28.27	21.74	7.65	25.35
1943 ..	23.83	23.98	25.39	22.98	21.47	28.59	50.00	13.30	24.04
1944 ..	21.96	23.09	21.70	19.31	21.35	25.00	22.47	23.44	22.04
1945 ..	21.79	21.11	23.96	21.17	20.43	20.74	33.34	7.41	21.77
1946 ..	21.97	20.22	22.31	18.85	21.15	23.07	30.30	15.45	21.25

(*a*) Number of deaths of children aged under one month per 1,000 live births registered. (*b*) Not available. (*c*) Part of New South Wales prior to 1911. (*d*) Based on deaths of infants born in the Australian Capital Territory. *See* footnote, page 755.

INFANTILE MORTALITY RATES (*a*): ONE MONTH AND UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901–05 ..	63.91	61.42	62.22	55.97	87.70	56.46	(*b*)	(*c*)	63.45
1906–10 ..	45.83	47.45	40.40	41.55	59.06	54.01	(*b*)	(*c*)	46.51
1911–15 ..	39.30	39.16	34.95	38.19	41.56	38.23	46.81	9.30	38.63
1916–20 ..	32.70	33.61	33.42	32.50	32.30	32.36	26.38	5.05	32.97
1921–25 ..	28.14	29.74	23.55	26.36	31.58	28.71	29.16	42.17	27.97
1926–30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
1931–35 ..	14.30	14.98	11.55	12.13	15.70	14.38	45.34	*d*11.03	14.00
1936–40 ..	13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941–45 ..	11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1942 ..	14.70	13.92	9.45	19.33	16.16	14.14	21.74	15.31	14.15
1943 ..	12.35	11.78	12.40	13.69	11.16	11.97	25.00	5.32	12.22
1944 ..	8.72	8.87	9.62	9.76	11.22	13.27	..	..	9.30
1945 ..	8.84	6.92	5.80	6.91	9.09	6.74	2.22	4.94	7.61
1946 ..	8.25	6.94	6.96	8.22	9.91	7.16	..	3.86	7.76

(*a*) Number of deaths of children aged one month and under one year per 1,000 live births registered. (*b*) Not available. (*c*) Part of New South Wales prior to 1911. (*d*) Based on death of infants born in the Australian Capital Territory. *See* footnote, page 755.

These tables indicate the striking decrease in infantile mortality in Australia since the beginning of the century, the number of deaths of children aged under one year per thousand births for 1946 being less than one-third of the average rate for 1901–05. The two lower tables reveal the fact that this improvement was due almost entirely to the decrease in deaths from preventable causes, the mortality rate for children aged one month but under one year declining by 88 per cent. while that for children aged under one month declined by only 36 per cent.

A further indication of the considerable improvement in the infantile mortality rate may be obtained from the following figures. During the years 1944 to 1946, of 490,283 children born 479,660 survived the first month of life and 475,644 the first year of life. Had the high infantile mortality rate of 1901 to 1905 obtained during this period only 473,878 children would have survived the first month of life and only 442,770 the first year of life.

(iii) *Districts.* The total number of births and of deaths of children under one year of age for 1946 are shown in *Demography Bulletin*, No. 64, for each of the sixty-five districts for which vital statistics have been tabulated.

(iv) *Various Countries and Cities.* Compared with other countries Australia occupies a very favourable position in regard to infantile mortality. In 1946, only New Zealand recorded a lower rate than Australia.

A study of the respective rates shows that a high birth-rate is often, though not invariably, accompanied by a high infantile death-rate.

INFANTILE MORTALITY RATES: VARIOUS COUNTRIES.

Country.	Infantile Mortality Rate.(*a*)						Crude Birth-rate (*b*) 1946.
	1906–15.	1921–25.	1926–30.	1931–35	1936–40.	1946.	
New Zealand (*o*) ..	61	43	37	32	32	25	25.2
Australia (*p*)	**74**	**58**	**52**	**41**	**39**	**29**	**23.6**
South Australia (*p*) ..	68	54	47	35	33	27	24.9
Victoria (*p*)	76	62	52	43	38	27	23.1
Queensland (*p*) ..	68	51	47	39	37	29	24.8
Tasmania (*p*)	77	60	53	44	41	30	27.2
New South Wales (*p*) ..	74	58	55	42	41	30	22.8
Western Australia ..	81	59	49	41	40	31	24.6
Sweden	74	60	58	50	42	(*i*) 30	19.6
United States of America ..	(*d*)	74	68	59	51	(*k*) 36	23.3
Union of South Africa (*c*) ..	(*e*) 91	73	67	63	53	36	27.7
Norway	(*d*)	52	49	45	(*g*) 40	(*j*) 37	22.5
Netherlands	115	64	56	45	37	39	30.2
Switzerland	108	65	54	48	45	(*k*) 41	20.0
Great Britain and Northern Ireland	(*d*)	78	70	65	59	43	19.4
England and Wales ..	113	76	68	62	56	43	19.1
Scotland	113	92	85	81	76	54	20.3
Northern Ireland ..	92	82	79	78	77	54	22.6
Denmark	103	82	82	71	60	(*k*) 48	23.4
Canada	(*d*)	98	93	75	64	(*k*) 51	26.5
Finland	(*e*) 112	96	88	72	72	(*k*) 62	27.0
Germany	168	122	94	74	63	(*l*) 66	(*n*) 16.0
Eire	92	69	70	68	69	(*k*) 69	22.9
Argentine	(*d*)	116	113	97	96	(*i*) 80	(*k*) 25.8
Italy	144	127	119	105	103	84	22.3
Belgium	139	100	95	82	77	(*k*) 92	18.1
Spain	156	143	124	113	121	(*i*) 93	(*k*) 22.9
Greece	(*d*)	(*d*)	(*d*)	122	(*h*) 112	(*m*) 99	(*j*) 23.5
France	122	95	89	73	70	(*k*) 108	20.6
Mexico	(*d*)	(*f*) 223	173	134	127	110	42.5
Japan	151	159	137	120	(*h*) 112	(*m*) 114	25.3
Hungary	(*e*) 198	187	172	157	131	(*n*) 116	17.0
Czechoslovakia	(*d*)	155	147	130	(*h*) 122	(*n*) 121	21.9
Portugal	(*d*)	146	146	146	135	121	24.7
Ceylon	(*e*) 207	190	175	182	160	(*n*) 132	(*n*) 40.5
Poland	(*d*)	(*d*)	147	137	(*h*) 139	(*j*) 140	(*n*) 24.6
Yugoslavia	(*d*)	(*d*)	151	153	(*h*) 141	(*j*) 144	(*l*) 25.9
Chile	(*e*) 301	265	229	248	234	160	32.4
Rumania	(*e*) 195	201	192	182	180	(*n*) 184	23.8
Egypt	(*d*)	144	152	165	163	(*i*) 202	(*l*) 42.2

(*a*) Number of deaths under 1 year per 1,000 births registered. (*b*) Number of births per 1,000 mean population. (*c*) White population only. (*d*) Not available. (*e*) 1911–13. (*f*) 1922–25. (*g*) 1935–39. (*h*) 1935–38. (*i*) 1944. (*j*) 1939. (*k*) 1945. (*l*) 1942. (*m*) 1938. (*n*) 1943. (*o*) Excluding Maoris. (*p*) Excluding full-blood aboriginals.

In 1939 the Australian cities Melbourne, Brisbane and Adelaide were among the ten cities having the lowest rates in the following list. The list is headed by Oslo (28), Auckland (29), and Amsterdam (29), the next seven cities being San Francisco, Stockholm, Melbourne, Chicago, Copenhagen, Brisbane and Adelaide. Of the cities named Madras had the highest rate, 238.

INFANTILE MORTALITY RATES (*a*) : VARIOUS CITIES.

City.	Infantile Mortality Rate.(*a*)		City.	Infantile Mortality Rate.(*a*)	
	1921.	1939.		1921.	1939.
Oslo	54	28	Cape Town(*d*) ..	82	49
Auckland(*b*) ..	54	29	Hamburg	95	50(*f*)
Amsterdam.. ..	54	29	Leipzig	136	50(*f*)
San Francisco ..	50	30	Antwerp	98	50
Stockholm	61	31	Johannesburg(*d*) ..	101	52
Melbourne(*c*) ..	74	32	Leeds	98	57
Chicago	84	32	Berlin	135	58(*f*)
Copenhagen ..	67	34	Breslau	170	58(*f*)
Brisbane(*c*).. ..	62	34	Birmingham ..	82	59
Adelaide(*c*).. ..	74	35	Paris	95	61
Sydney(*c*)	62	35	Manchester ..	94	61
Wellington(*b*) ..	61	36	Munich	126	64(*f*)
New York City ..	72	37	Cologne	140	66(*f*)
Perth(*c*)	81	38	Montreal	158	70
Detroit	83	40	Liverpool	105	71
Christchurch(*b*) ..	54	42	Rome	(*e*)	79(*f*)
Philadelphia ..	78	42	Edinburgh	96	81
Toronto	91	43	Belfast	115	85
Geneva	(*e*)	43	Glasgow	106	86
Los Angeles ..	68	45	Dublin	123	90
Hobart(*c*)	75	47	Aberdeen	108	95
Sheffield	99	47	Lisbon	(*e*)	133
London	80	47	Cairo	(*e*)	191
Dresden	115	48(*f*)	Bombay	402	213
Washington ..	83	48	Madras	281	238

(*a*) Number of deaths under 1 year per 1,000 births registered. (*b*) Excluding Maoris. (*c*) Excluding full-blood aboriginals. (*d*) White population only. (*e*) Not available. (*f*) For 1938.

(v) *Causes of Deaths of Children under one Year.* The following table shows for 1946 the ages of all children who died under one year of age from each of twenty-three causes. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63. The infantile mortality rates for all births are shown for 1911, 1921, 1931, 1941 and 1946 and for ex-nuptial births for 1925, 1931, 1941 and 1946. Full particulars of the causes of death of all children who died in 1946 under one year and also of those under one month are given for each State and Territory in *Demography Bulletin*, No. 64. This contains in addition detailed information for Australia as to the age at which children died from each cause of death.

In 1946, pre-natal influences, such as congenital malformations, congenital debility and premature birth, together with injuries at birth and other diseases of early infancy accounted for 3,753 or 73 per cent. of all deaths under one year; and of these 3,753 deaths, 3,020 or 80 per cent., occurred less than a week after birth. Among the survivors of the first week, broncho-pneumonia caused the greatest number of deaths attributable to a specific disease. This disease was responsible for 341 deaths, representing 7 per cent. of all deaths under one year, or 1.93 per 1,000 births. Diarrhoea and enteritis caused 177 deaths and other pneumonia 178.

CAUSES OF DEATH OF CHILDREN UNDER ONE YEAR: AUSTRALIA, 1946.

Cause of Death.	Age at Death.															
	Under 1 week.	1 week.	2 weeks.	3 weeks.	1 month.	2 months.	3 months.	4 months.	5 months.	6 months.	7 months.	8 months.	9 months.	10 months.	11 months.	Total under
Cerebro-spinal Meningococcal Meningitis	..	1	..	1	1	3	1	3	3	1	4	2	..	3	1	
Whooping Cough	..	..	..	2	5	9	5	5	2	5	6	6	3	..	2	
Diphtheria	..	..	..	..	..	2	1	..	..	1	..	2	6	3	2	
Erysipelas	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	
Respiratory Tuberculosis	..	..	..	..	..	..	..	..	2	1	1	..	..	..	2	
Tuberculosis of Meninges	1	..	..	..	..	..	..	..	..	..	1	1	2	..	1	
Tuberculosis, Other Forms	..	..	..	..	1	2	..	1	..	..	1	1	..	..	5	
Syphilis	1	..	..	..	2	1	..	..	1	..	..	..	..	..	..	
Measles	..	..	..	..	1	1	..	1	..	4	1	1	2	4	4	
Meningitis (Non-meningococcal)	3	1	2	3	5	3	2	3	1	3	1	1	1	2	2	
Convulsions	4	1	..	..	..	..	2	2	2	2	..	2	2	1	..	
Acute Bronchitis	1	..	..	..	..	1	..	..	1	1	..	..	3	..	..	
Broncho-pneumonia	56	23	17	11	42	28	27	21	17	23	15	21	18	10	12	3
Pneumonia, Other	18	9	4	10	19	15	14	19	9	14	12	14	10	3	8	1
Other Diseases of the Stomach	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Diarrhoea and Enteritis	8	6	11	10	29	12	15	11	16	13	20	7	7	6	6	1
Hernia and Intestinal Obstruction	5	2	..	2	2	2	2	10	5	5	2	4	7	..	2	
Congenital Malformations	341	61	38	27	56	33	27	29	15	21	17	10	14	7	12	7
Congenital Debility	69	5	2	5	16	..	5	2	1	1	1	..	1	1	..	1
Premature Birth	1,586	90	31	19	20	5	2	2	..	..	..	..	..	..	..	1,7
Injury at Birth	558	23	11	3	5	5	1	1	1	1	1	..	..	..	..	6
Other Diseases of Early Infancy	466	50	18	11	11	2	2	1	3	2	3	1	1	..	..	5
Other Causes	72	21	17	11	32	41	43	20	23	33	27	18	21	11	30	4
Total	3,189	293	151	115	248	165	149	131	102	131	113	91	98	51	89	5,1

	All Children.					Ex-nuptial Children.(a)				
	No. of Deaths per 1,000 Total Births.					No. of Deaths per 1,000 Ex-nuptial Births.				No. Deat 194
	1911.	1921.	1931.	1941.	1946.	1925.	1931.	1941.	1946.	
Cerebro-spinal Meningococcal Meningitis	..	0.03	0.08	0.16	0.14	0.48	0.17	0.39	0.26	
Whooping Cough	1.57	1.97	1.58	1.27	0.28	2.06	1.71	1.94	0.40	
Diphtheria	0.25	0.59	0.25	0.13	0.10	0.32	0.34	..	0.13	
Erysipelas	0.16	0.24	0.11	0.04	0.01	0.16	..	0.19	..	
Respiratory Tuberculosis	0.08	0.07	0.03	0.04	0.03	..	..	..	0.26	
Tuberculosis of Meninges	0.31	0.18	0.22	0.10	0.03	0.32	0.34	0.19	..	
Tuberculosis, Other Forms	0.22	0.08	0.04	0.05	0.06	..	..	0.19	..	
Syphilis	0.85	0.56	0.20	0.09	0.03	1.27	0.51	0.77	0.26	
Measles	0.34	0.15	0.10	0.01	0.11	0.16	0.51	..	0.39	
Meningitis (Non-meningococcal)	1.83	1.10	0.32	0.30	0.19	0.32	..	0.19	0.40	
Convulsions	2.55	1.45	0.39	0.17	0.10	2.38	0.51	0.39	..	
Acute Bronchitis	2.34	1.50	0.32	0.11	0.04	0.48	0.86	..	0.13	
Broncho-pneumonia	2.86	3.08	2.82	2.96	1.93	8.09	5.31	4.65	4.34	
Pneumonia, Other	1.90	2.08	1.62	1.42	1.01	2.38	3.43	2.32	1.18	
Other Diseases of the Stomach	0.47	0.71	0.13	0.05	..	1.11	0.34	0.19	..	
Diarrhoea and Enteritis	16.99	15.01	3.26	2.07	1.01	19.18	8.39	4.26	2.50	
Hernia and Intestinal Obstruction	0.72	0.57	0.41	0.19	0.28	0.47	0.17	0.39	0.26	
Congenital Malformations	2.99	3.74	4.23	4.63	4.02	3.64	4.28	4.06	2.89	
Congenital Debility (b)	22.41	7.64	2.60	1.98	0.61	9.51	7.19	3.48	1.05	
Premature Birth		15.29	14.04	12.41	9.95	20.93	21.92	18.00	13.92	1
Injury at Birth	4.07	5.53	2.81	4.27	3.46	1.90	3.08	5.23	3.81	
Other Diseases of Early Infancy			3.29	4.14	3.24	2.69	3.77	4.45	2.37	
Other Causes	5.58	4.16	3.29	3.13	2.38	6.98	5.82	7.55	5.12	
Total	68.49	65.73	42.14	39.72	29.01	84.83	68.65	58.83	39.67	3

(a) Included in figures for all children. (b) Includes Icterus and Sclerema prior to 1931.

(vi) *Deaths of Ex-nuptial Children under one Year.* The deaths of ex-nuptial children were tabulated by this Bureau for the first time in 1925. The causes of death of these children in 1946 and the rates in respect of 1925, 1931, 1941 and 1946 are shown in the preceding table. Corresponding figures for 1945 may be obtained from *Demography*

Bulletin, No. 63. Full particulars of the causes of death of ex-nuptial children who died in 1946 aged under one year and also of those under one month are given for each State and Territory in *Demography Bulletin*, No. 64. This contains in addition detailed information for Australia as to the age at which ex-nuptial children died from each cause of death.

Pre-natal influences, such as congenital malformations, congenital debility and premature birth, together with injuries at birth and other diseases of early infancy accounted for 183 or 61 per cent., broncho-pneumonia for 33 or 11 per cent., and diarrhœa and enteritis for 19, or 6 per cent. of the total deaths of ex-nuptial children under 1 year.

9. **Deaths in Age-groups.**—A distribution into age-groups has been made of the 364,165 deaths which occurred in Australia during the five years ended 1946, and the results are shown in the following table :—

AGGREGATE DEATHS IN AGE-GROUPS : AUSTRALIA, 1942 TO 1946.

Age-group (Years).	Number of Deaths.			Percentage of Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
				%	%	%
Under 1	14,502	10,950	25,452	7.26	6.66	6.99
1–4	3,731	3,083	6,814	1.87	1.87	1.87
5–19	5,447	3,600	9,047	2.73	2.19	2.48
20–39	10,578	11,480	22,058	5.30	6.98	6.06
40–59	41,212	28,981	70,193	20.64	17.62	19.28
60–64	20,338	13,014	33,352	10.18	7.91	9.16
65 and over ..	103,830	93,373	197,203	52.00	56.77	54.15
Age unspecified ..	41	5	46	0.02	..	0.01
Total ..	199,679	164,486	364,165	100 00	100.00	100.00

A table showing the corresponding percentages for earlier periods from the year 1901 has been added to show the movement over a longer term. The most striking change is the substantial decrease in the group " under 1 year ". At the other end of the table, the group " 65 years and over " has increased considerably. The percentages in all age-groups under 40 have fallen and those in all age-groups from 40 onwards have risen. These changes are due partly to improvement in the efficiency of medical science and partly to changes in the age distribution of the population. The latter changes are themselves in part due to increased length of life made possible by medical science, and in part to changes in the volume of migration and the falling birth-rate :—

DEATHS IN AGE-GROUPS : PERCENTAGES, AUSTRALIA.

Period.	Age-group (Years).								
	Under 1.	1–4.	5–19.	20–39.	40–59.	60–64.	65 and Over.	Unspecified.	Total.
					MALES.				
1901–10 %	19.80	5.84	5.84	13 85	19 70	5.71	29.08	0.18	100.00
1911–20 %	16.44	5.65	5.18	13 44	22.16	6.83	30.11	0.19	100.00
1921–30 %	13.18	4.35	4.86	11.00	21.76	9.01	35.71	0.13	100.00
1931–40 %	7.53	2.49	4 02	8 79	21 67	8 95	46 50	0.05	100.00
					FEMALES.				
1901–10 %	21.47	7.28	7.08	16.54	15.67	4.77	27.15	0.04	100.00
1911–20 %	16.95	6.69	5.92	15.79	17.85	5.31	31.44	0.05	100.00
1921–30 %	12.98	4.72	4.85	13.59	18.96	7.27	37.61	0.02	100.00
1931–40 %	7.22	2.66	3 58	10.10	19.11	7.60	49.72	0.01	100.00
					PERSONS.				
1901–10 %	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00
1911–20 %	16.66	6.09	5.49	14.44	20.32	6.19	30.68	0.13	100.00
1921–30 %	13.10	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00
1931–40 %	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00

10. **Deaths at Single Ages and in Age-Groups.**—(i) *General.* The deaths registered in Australia in 1945 and 1946 will be found tabulated in groups of five years for each State and Territory and in single ages for Australia in *Demography Bulletin*, Nos. 63–64, respectively. The deaths during the first fifteen years of life have been tabulated there in single ages and for the first year of life in shorter periods. A summary for Australia for 1946 is given in the following table :—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS : AUSTRALIA, 1946.

Age at Death.	Males.	Females.	Persons.	Age at Death.	Males.	Females.	Persons.
Under 1 week ..	1,841	1,348	3,189	Total 5– 9 years ..	254	209	463
1 week and under 2 ..	151	142	293	„ 10–14 „ ..	217	149	366
2 weeks and under 3 ..	80	71	151	„ 15–19 „ ..	456	250	706
				„ 20–24 „ ..	486	383	869
3 weeks and under 1 month	69	46	115	„ 25–29 „ ..	482	485	967
				„ 30–34 „ ..	623	559	1,182
Total under 1 month	2,141	1,607	3,748	„ 35–39 „ ..	767	662	1,429
				„ 40–44 „ ..	1,018	763	1,781
				„ 45–49 „ ..	1,622	1,189	2,811
1 month and under 3 ..	240	173	413	„ 50–54 „ ..	2,324	1,712	4,036
3 months and under 6 ..	204	178	382	„ 55–59 „ ..	3,477	2,111	5,588
6 months and under 12 ..	337	236	573	„ 60–64 „ ..	4,205	2,689	6,894
				„ 65–69 „ ..	4,880	3,251	8,131
Total under 1 year ..	2,922	2,194	5,116	„ 70–74 „ ..	4,907	4,058	8,965
				„ 75–79 „ ..	5,138	4,590	9,728
				„ 80–84 „ ..	3,984	4,061	8,045
				„ 85–89 „ ..	2,158	2,547	4,705
1 year	264	247	511	„ 90–94 „ ..	636	803	1,439
2 years	155	122	277	„ 95–99 „ ..	89	160	249
3 „	115	89	204	„ 100 and over ..	9	15	24
4 „	85	79	164	Age unspecified ..	10	1	11
Total under 5 years	3,541	2,731	6,272	Total all ages ..	41,283	33,378	74,661

(ii) *Rates.* The following table gives the average annual death-rates in age-groups per 1,000 living for the period 1932 to 1934, i.e., the Census year 1933 and the years immediately preceding and following. Deaths in the Northern Territory and the Australian Capital Territory are included in the total for Australia but not in any of the States. Similar details for the years 1920 to 1922 are given in Official Year Book No. 22, p. 975.

AVERAGE ANNUAL DEATH-RATES : AGE-GROUPS, 1932-34.

Age-group (Years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
			MALES.				
0– 4 ..	12.51	12.65	12.21	9.91	12.81	12.77	12.33
5– 9 ..	1.41	1.72	1.56	1.21	1.56	2.08	1.53
10–14 ..	1.23	1.38	1.08	1.04	1.40	1.27	1.24
15–19 ..	1.69	1.76	1.93	1.71	1.76	2.05	1.76
20–24 ..	2.28	2.31	2.81	2.31	2.52	2.73	2.41
25–29 ..	2.21	2.58	2.93	2.50	2.85	2.98	2.52
30–34 ..	2.81	2.82	3.50	2.53	3.10	3.78	2.96
35–39 ..	3.76	3.85	4.61	3.26	4.01	4.71	3.92
40–44 ..	5.34	4.93	6.04	4.71	5.69	4.85	5.28
45–49 ..	7.91	7.61	7.98	6.80	8.81	6.90	7.76
50–54 ..	11.62	11.25	11.82	9.81	13.48	9.96	11.45
55–59 ..	17.70	18.68	17.58	15.15	21.43	14.47	17.89
60–64 ..	25.74	26.66	26.92	25.08	28.26	23.92	26.27
65–69 ..	39.99	41.17	39.94	36.14	42.40	35.11	40.03
70–74 ..	62.28	63.96	58.90	57.29	63.40	59.22	61.85
75–79 ..	95.52	98.12	94.59	92.66	105.14	94.23	96.26
80–84 ..	156.44	157.81	168.61	146.83	176.82	160.80	158.70
85–89 ..	231.04	233.33	218.42	239.45	264.96	204.45	230.75
90 and over	313.38	348.76	314.86	303.07	380.77	401.97	327.55

AVERAGE ANNUAL DEATH-RATES: AGE-GROUPS, 1932–34—*continued.*

Age-group (Years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				FEMALES.			
0– 4 ..	10.05	7.04	10.72	8.30	8.64	10.42	10.00
5– 9 ..	1.17	1.30	1.03	1.03	1.27	1.54	1.19
10–14 ..	0.83	0.97	0.93	0.90	0.99	0.91	0.90
15–19 ..	1.36	1.39	1.50	1.23	1.26	2.22	1.39
20–24 ..	2.03	2.00	2.77	2.35	1.94	2.58	2.11
25–29 ..	2.44	2.50	2.81	2.74	2.75	3.74	2.60
30–34 ..	2.88	2.87	3.44	2.64	3.13	3.63	2.97
35–39 ..	3.75	3.37	4.05	3.88	4.24	4.43	3.74
40–44 ..	4.24	4.32	4.89	4.10	5.79	4.88	4.37
45–49 ..	6.02	6.11	6.14	5.78	6.35	5.44	6.03
50–54 ..	8.27	8.81	8.61	8.07	9.08	10.08	8.56
55–59 ..	11.62	12.49	12.02	11.26	10.69	11.62	15.54
60–64 ..	17.27	18.73	17.19	17.78	17.32	16.87	17.77
65–69 ..	29.55	29.91	27.01	27.13	29.81	30.46	29.21
70–74 ..	45.95	48.18	49.03	42.31	44.10	48.31	46.70
75–79 ..	74.78	81.13	76.29	75.65	74.42	83.58	77.47
80–84 ..	125.55	127.91	126.63	120.74	120.99	125.15	125.68
85–89 ..	119.40	204.57	208.19	207.40	192.39	195.28	199.94
90 and over	292.10	327.19	370.23	233.58	397.20	363.63	306.24
				PERSONS.			
0– 4 ..	11.31	11.37	11.48	9.12	11.35	11.62	11.19
5– 9 ..	1.29	1.51	1.30	1.12	1.41	1.81	1.36
10–14 ..	1.03	1.18	1.01	0.97	1.20	1.09	1.07
15–19 ..	1.52	1.57	1.72	1.47	1.51	2.14	1.58
20–24 ..	2.16	2.16	2.60	2.35	2.24	2.66	2.26
25–29 ..	2.32	2.54	2.87	2.61	2.80	3.35	2.56
30–34 ..	2.85	2.85	3.47	2.59	3.12	3.71	2.96
35–39 ..	3.76	3.61	4.34	3.57	4.12	4.56	3.83
40–44 ..	4.79	4.62	5.50	4.40	5.15	4.86	4.83
45–49 ..	6.99	6.84	7.14	6.29	7.67	6.19	6.92
50–54 ..	10.00	10.00	10.37	8.93	11.47	10.02	10.04
55–59 ..	14.70	15.46	14.86	13.19	16.63	13.09	14.88
60–64 ..	21.56	22.46	22.41	21.35	23.44	20.52	22.04
65–69 ..	34.90	35.29	34.06	31.39	37.01	32.87	34.69
70–74 ..	54.31	55.68	54.55	49.43	55.28	53.89	54.38
75–79 ..	85.18	89.06	86.33	83.92	91.08	88.97	86.82
80–84 ..	140.43	140.48	148.56	132.56	149.72	142.64	141.13
85–89 ..	209.89	215.56	213.10	220.66	222.90	199.07	214.17
90 and over	301.13	334.60	341.25	253.61	389.21	376.36	314.41

11. **Deaths of Centenarians.**—In previous years, up to and including Official Year Book No. 33, particulars are given concerning persons aged 100 years and upwards who died each year. However, while the Registrars-General of the various States verify the ages as far as possible, absolute reliance cannot be placed on the accuracy of the information owing to the well-known tendency of very old people to overstate their ages, and it is considered advisable to discontinue publication of this table. In connexion with this question it may be noted that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically from 1874 only, the Act of 1836 having left many loopholes for those unwilling to register the births of their children.

12. **Length of Residence in Australia of Persons who Died.**—The length of residence in Australia of all persons whose deaths were registered in 1940 is shown in the following table. Tabulations for subsequent years were discontinued but will be revived for 1947

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED IN 1940.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in Australia ..	28,139	23,178	51,317	Resident 25 to 29 years ..	1,090	712	1,802
Resident under 1 year ..	54	25	79	,, 30 to 34 ,, ..	796	371	1,167
,, 1 year ..	31	28	59	,, 35 to 39 ,, ..	320	159	479
,, 2 years ..	26	16	42	,, 40 to 44 ,, ..	538	232	770
,, 3 ,, ..	21	20	41	,, 45 to 49 ,, ..	393	213	606
,, 4 ,, ..	13	12	25	,, 50 to 54 ,, ..	1,321	793	2,114
,, 5 ,, ..	16	14	30	,, 55 to 59 ,, ..	1,100	761	1,861
,, 6 ,, ..	25	5	30	,, 60 to 64 ,, ..	871	644	1,515
,, 7 ,, ..	11	9	20	,, 65 yrs. and over	1,112	1,275	2,387
,, 8 ,, ..	18	9	27	Length of residence not stated	1,491	472	1,963
,, 9 ,, ..	11	5	16				
,, 10 to 14 years	386	247	633				
,, 15 to 19 ,,	530	301	831				
,, 20 to 24 ,,	295	275	570	Total	38,608	29,776	68,384

13. **Birthplace of Persons who Died.**—A table giving a summary of birthplaces of persons whose deaths were registered in 1911 and 1940 will be found in Official Year Book No. 34, p. 337. More detailed information will be found in *Demography Bulletin*, No. 58 Tabulations were discontinued for the years 1941 to 1945 inclusive but were revived for 1946, details of which appear in *Demography Bulletin*, No. 64.

14. **Occupation of Males who Died.**—A table showing occupations of males who died during 1946 appears in *Demography Bulletin*, No. 64.

15. **Causes of Deaths.**—(i) *General.* The classification adopted by this Bureau is that of the International Institute of Statistics, as amended by the Committees of Revision which met in Paris in 1909, 1920, 1929 and 1938.

(ii) *Mortality Statistics for* 1907 *and Subsequent Years.* The statistics relating to causes of death in Australia from 1907 onward have been tabulated in this Bureau in accordance with the above-mentioned classification, and the system is employed also in the State statistical offices. Particulars from 1940 onward have been tabulated on the 1938 revision of the International List.

(iii) *Classification of Causes of Death, according to the Intermediate and the Abridged International Classifications.* An abridged classification, which enumerates forty-three diseases and groups of diseases according to the revised classification, has been in use in many European countries and American States until recently, and a table has been given in past issues of the Official Year Book showing the causes of death according to the abridged classification, so that the results may be compared with those of other countries which used the abridged index.

As the result of an international treaty signed in London in 1934, the intermediate classification of causes of death, or the "minimum nomenclature" covering 87 main causes or groups of causes, has now been adopted in most countries for the purpose of making international comparisons. This classification appears in the pages following and shows the number of deaths during 1946 in Australia for each cause enumerated. To preserve continuity with former statistics, particulars for 1946 have been compiled in the abridged form and are shown on p. 787 in conjunction with those for the previous four years, and averages over five-yearly periods to 1941–45 are shown in the same form on p. 788.

The compilations for the years 1942 to 1946 will be found in full detail in *Demography Bulletins*, Nos. 60 to 64. In the following tables in which the intermediate classification has been employed, tables A, B and C show deaths of males, females and persons, respectively, for 1946. Table D shows in the abridged form, on the basis of the 1938 revision of the International List, the number of persons who died in each of the years 1942 to 1946 and gives the rate per million of population for the last-named year.

Since death-rates are subject to continual fluctuation, it is unsafe to base deductions on the figures relating to a single year. In order, therefore, to furnish a valid basis for comparison, three five-yearly periods have been shown in table E giving the number of deaths and the rates per million persons. While the absolute number of deaths has increased, the death-rate has shown a very satisfactory decrease, which is reflected in the great majority of the causes specified in the table.

A.—CAUSES OF DEATH : MALES, 1946.

INTERMEDIATE CLASSIFICATION.

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust
1. Typhoid and Paratyphoid Fevers (1)	1, 2	2	1	1	..	3	..	..	..	7
2. Plague (2)	3	..	..	..	..	..	..	..	..	..
3. Scarlet Fever (3)	8	4	2	..	..	..	..	..	..	6
4. Whooping Cough (4)	9	11	5	5	1	1	..	..	..	23
5. Diphtheria (5)	10	33	8	14	2	4	3	..	..	64
6. Tuberculosis of the Respiratory System (6)	13	549	404	215	109	116	57	1	1	1,452
7*a*. Tubercular Meningitis (7*a*)	14 (*a*)	9	10	4	..	..	3	..	1	27
7*b*. Other forms of Tuberculosis (7*b*)	14 (*b*)–22	21	22	9	7	6	6	..	..	71
8. Septicæmia, Purulent Infection (Non-puerperal) (14)	24	7	6	1	7	1	2	..	..	24
9. Dysentery (14)	27	4	4	4	3	2	..	..	..	17
10. Malaria (8)	28	5	2	..	..	..	..	1	..	8
11. Syphilis (9)	30	103	74	40	22	23	7	..	..	269
12*a*. Influenza—Pneumonic (10*a*)	33 (*a*)	20	19	20	2	2	2	..	..	65
12*b*. Influenza—Other (10*b*)	33 (*b*)	23	11	14	2	3	4	..	..	57
13. Small-pox (11)	34	..	..	..	..	..	..	..	..	..
14. Measles (12)	35	13	3	6	9	18	1	..	..	50
15. Typhus Fever (13)	39	2	..	3	1	1	..	..	..	7
16. Diseases caused by Helminths (14)	40–42	5	15	1	2	3	1	..	..	27
17. Other Infectious and Parasitic Diseases (14)	*	113	67	38	18	15	12	..	..	263
18. Cancer of the Buccal Cavity and Pharynx (15)	45	114	69	42	20	26	7	..	..	278
19. Cancer of the Digestive Organs and Peritoneum (15)	46	958	757	354	230	169	88	1	3	2,560
20. Cancer of the Respiratory System (15)	47	164	141	62	41	38	17	1	..	464
22. Cancer of the Breast (15)	50	1	2	..	3	..	1	..	..	7
23. Cancer of Other or Unspecified Organs (15)	49, 51–55	482	372	188	123	64	41	..	1	1,271
24. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	97	49	29	19	15	4	..	..	213
25. Acute Rheumatic Fever (20)	58	25	4	13	5	8	5	..	..	60
26. Chronic Rheumatism and Gout (17)	59, 60	13	20	6	10	2	7	1	..	59
27. Diabetes Mellitus (18)	61	194	142	55	56	25	16	..	..	488
28. Diseases of the Thyroid and Parathyroid Glands (20)	63	14	8	2	3	1	..	..	..	28
29. Other General Diseases (20)	62, 64–66	14	10	11	10	7	1	..	1	54
30. Avitaminoses (20)	67–71	..	..	..	..	1	1	..	..	2
31. Anæmias (20)	73	37	23	12	8	5	4	..	..	89
32. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74–76	63	35	31	29	12	6	..	..	176
33. Alcoholism (acute or chronic) (19)	77	48	13	25	5	..	..	..	..	91
34. Other Chronic Poisonings (20)	78, 79	3	5	2	..	..	..	..	..	10
35. Meningitis (Non-meningococcal) (21)	81	32	7	16	6	11	5	..	..	77
36. Diseases of the Spinal Cord (21)	82	43	27	16	14	7	3	..	..	110
37. Intra-cranial Lesions of Vascular Origin (22)	83	1,314	842	430	307	192	111	3	3	3,202
38. Mental Diseases and Deficiency (23)	84	30	11	16	2	3	3	..	..	65
39. Epilepsy (23)	85	59	16	15	5	6	6	..	..	107
40. Other Diseases of the Nervous System (23)	80, 86, 87	97	60	42	29	11	7	..	..	246
41. Diseases of the Eye, Ear and their Annexa (23)	88, 89	11	9	6	9	1	..	..	..	36
42. Pericarditis (24)	90	7	9	6	..	5	..	..	..	27
43. Chronic Affections of the Valves and Endocardium (24)	92	270	196	125	65	45	26	..	..	727
44. Diseases of the Myocardium (24)	93	3,034	2,076	1,040	546	484	181	2	8	7,371
45. Diseases of the Coronary Arteries and Angina Pectoris (24)	94	1,949	1,278	712	411	266	135	1	9	4,761
46. Other Diseases of the Heart (24)	91, 95	295	209	74	75	33	28	2	..	716

* No. 17 :—4–7, 11, 12, 23, 25, 26, 29, 31, 32, 36–38, 43, 44.

A.—CAUSES OF DEATH: MALES, 1946—*continued.*

INTERMEDIATE CLASSIFICATION.

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A.C.T.	Aust
47. Arteriosclerosis and Gangrene (25)	97, 98	333	254	68	78	104	29	..	1	867
48. Other Diseases of the Circulatory System (25)	96, 99–103	90	60	50	19	20	12	2	..	253
49*a*. Acute Bronchitis (26*a*) ..	106 (*a*)(*c*)	27	23	20	5	3	2	..	1	81
49*b*. Chronic Bronchitis (26*b*) ..	106 (*b*)(*d*)	109	75	48	24	23	11	..	..	290
50. Pneumonia and Broncho-pneumonia (27)	107–109	690	632	314	160	182	99	2	2	2,081
51. Pleurisy (28)	110	19	22	4	9	9	4	..	..	67
52. Other Diseases of the Respiratory System (except Tuberculosis) (28)	104, 105, 111–114	150	136	83	41	56	21	..	..	487
53. Ulcer of the Stomach and Duodenum (32*b*)	117	148	134	40	40	24	18	1	..	405
54. Diarrhœa and Enteritis (under 2 years of age) (29*a*) ..	119	34	43	27	14	5	1	..	..	124
55. Diarrhœa and Enteritis (2 years and over) (29*b*)	120	49	18	16	12	7	3	..		105
56. Appendicitis (30)	121	85	50	39	14	13	5	..	..	206
57. Hernia, Intestinal Obstruction (32*a*)	122	133	78	69	27	28	11	..	1	347
58. Cirrhosis of the Liver (31*a*) ..	124	62	62	37	19	13	4	2	..	199
59. Other Diseases of the Liver and Biliary Passages, including Biliary Calculi (31*b*) ..	125–127	46	55	27	9	8	5	..		150
60. Other Diseases of the Digestive System (32*b*)	*	64	52	34	26	21	8	..	..	205
61. Nephritis (33)	130–132	693	648	287	122	95	69	..	..	1,914
62. Other Diseases of the Kidneys and Ureters (34)	133	37	29	35	8	12	8	..	1	130
63. Calculi of the Urinary Passages (34)	134	16	20	17	3	5	..	..	1	62
64. Diseases of the Urinary Bladder (34)	135	7	10	7	5	6	4	..	..	39
65. Diseases of the Urethra, Urinary Abscess, etc. (34)	136	8	6	4	2	1	..	..	..	21
66. Diseases of the Prostate (34) ..	137	191	194	88	46	47	28	1	1	596
67. Diseases of the Genital Organs, not specified as Venereal (34)	138, 139	1				..	..		..	1
73. Diseases of the Skin and Cellular Tissue (37)	151–153	25	5	6	5	..	1	..	..	42
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37)	154–156	19	8	4	2	2	3	..	..	38
75. Congential Malformations (Still-births not included) (38) ..	157	190	106	61	35	30	14	1	1	438
76. Congenital Debility (38)	158	24	11	10	6	3	2	..	..	56
77. Premature Birth (38) .. .	159	393	208	180	82	73	46	2	3	987
78. Injury at Birth (38)	160	157	92	54	25	24	18	..	..	370
79. Other Diseases Peculiar to the First Year of Life (38) .	161	142	82	51	26	20	18	..	1	340
80. Senility (39)	162	518	314	187	113	51	18	2	..	1,203
81. Suicide (40)	163, 164	190	128	96	39	46	12	2	..	513
82. Homicide (41)	165–168	24	8	10	5	4	1	1	..	53
83. Automobile Accidents (42) ..	170	343	278	137	75	93	45	3	1	975
84. Other Violent or Accidental Deaths (43)	169, 171–195	674	367	363	135	128	73	11	3	1,754
85. Deaths due to Operations of War (43)	196, 197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43) ..	198	..	..	..	1	..	1	..	..	2
87. Ill-defined or Unspecified (44) ..	199, 200	55	29	28	35	..	..	3	..	150
Total Males	..	16,038	11,280	6,206	3,483	2,791	1,395	46	44	41,283

* No. 60:—115, 116, 118, 123, 128, 129.

B.—CAUSES OF DEATH : FEMALES, 1946.

INTERMEDIATE CLASSIFICATION

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
1. Typhoid and Paratyphoid Fevers (1)	1, 2	1	1	..	..	..	..	..	..	2
2. Plague (2)	3	..	..	..	..	..	..	..	..	..
3. Scarlet Fever (3)	8	..	1	..	..	..	..	..	..	1
4. Whooping Cough (4)	9	33	6	10	2	..	..	..	..	51
5. Diphtheria (5)	10	24	9	6	6	7	3	..	..	55
6. Tuberculosis of the Respiratory System (6)	13	269	246	88	57	47	40	..	1	748
7*a*. Tubercular Meningitis (7*a*) ..	14 (*a*)	19	8	1	1	..	4	..	..	33
7*b*. Other Forms of Tuberculosis (7*b*)	14(*b*)–22	21	21	2	8	2	8	..	..	62
8. Septicæmia, Purulent Infection (Non-puerperal) (14) ..	24	8	9	1	..	3	1	..	..	22
9. Dysentery (14)	27	4	6	4	3	..	..	..	..	17
10. Malaria (8)	28	..	..	1	..	..	..	..	..	1
11. Syphilis (9)	30	22	29	10	4	9	1	..	..	75
12*a*. Influenza—Pneumonic (8*a*) ..	33 (*a*)	17	15	16	1	4	1	..	1	55
12*b*. Influenza—Other (8*b*) ..	33 (*b*)	8	7	8	3	6	2	..	..	34
13. Small-pox (11)	34	..	..	..	..	..	..	..	..	..
14. Measles (12)	35	24	10	6	6	12	1	..	..	59
15. Typhus Fever (13)	39	..	..	1	..	..	..	..	..	1
16. Diseases caused by Helminths (14)	40–42	4	8	2	2	..	4	..	..	20
17. Other Infectious and Parasitic Diseases (14)	*	63	40	25	9	17	8	..	..	162
18. Cancer of the Buccal Cavity and Pharynx (15)	45	23	14	5	5	3	2	..	..	52
19. Cancer of the Digestive Organs and Peritoneum (15) ..	46	741	668	233	156	96	60	..	2	1,956
20. Cancer of the Respiratory System (15)	47	55	47	10	10	11	5	..	..	138
21. Cancer of the Uterus (15) ..	48	244	179	87	58	37	24	..	1	630
22. Cancer of the Breast (15) ..	50	316	326	115	97	50	26	..	..	930
23. Cancer of Other or Unspecified Organs (15)	49, 51–55	314	263	95	77	55	26	1	1	832
24. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	85	67	48	18	22	4	..	..	244
25. Acute Rheumatic Fever (20) ..	58	35	4	8	7	3	6	..	1	64
26. Chronic Rheumatism and Gout (17)	59, 60	29	50	17	14	8	5	..	..	123
27. Diabetes Mellitus (18)	61	335	290	117	94	50	21	1	..	908
28. Diseases of the Thyroid and Parathyroid Glands (20) ..	63	56	45	21	13	10	11	..	..	156
29. Other General Diseases (20) ..	62, 64–66	15	18	6	8	4	5	..	..	56
30. Avitaminoses (20)	67–71	..	..	..	..	..	..	..	..	..
31. Anæmias (20)	73	62	51	19	14	8	11	..	1	166
32. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74–76	67	42	28	14	11	4	..	..	166
33. Alcoholism (acute or chronic) (19)	77	4	3	6	3	2	..	..	..	18
34. Other Chronic Poisonings (20) ..	78, 79	..	1	2	..	..	..	..	..	3
35. Meningitis (Non-meningococcal) (21)	81	14	14	11	4	7	1	..	..	51
36. Diseases of the Spinal Cord (21) ..	82	32	18	9	11	4	1	..	..	75
37. Intra-cranial Lesions of Vascular Origin (22)	83	1,634	1,296	496	444	205	134	2	6	4,217
38. Mental Diseases and Deficiency (23)	84	17	8	8	4	3	1	..	..	41
39. Epilepsy (23)	85	43	16	11	5	1	2	..	..	78
40. Other Diseases of the Nervous System (23)	80, 86, 87	84	54	24	21	6	7	..	1	197
41. Diseases of the Eye, Ear and their Annexa (23)	88, 89	9	5	3	6	1	..	..	..	24
42. Pericarditis (24)	90	1	6	2	..	..	1	..	..	10
43. Chronic Affections of the Valves and Endocardium (24) ..	92	243	207	82	72	28	27	..	1	660
44. Diseases of the Myocardium (24)	93	2,426	1,855	829	495	307	133	..	6	6,051
45. Diseases of the Coronary Arteries and Angina Pectoris (24) ..	94	865	686	259	217	111	76	..	..	2,214
46. Other Diseases of the Heart (24)	91, 95	172	167	58	44	21	22	..	1	485
47. Arteriosclerosis and Gangrene (25)	97, 98	224	266	54	65	71	38	..	..	718
48. Other Diseases of the Circulatory System (25)	96, 99–103	81	62	46	15	35	18	..	..	257

* No. 17 :—4–7, 11, 12, 23, 25, 26, 29, 31, 32, 36–38, 43, 44.

B.—CAUSES OF DEATH : FEMALES, 1946—*continued.*

INTERMEDIATE CLASSIFICATION.

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
49*a*. Acute Bronchitis (26*a*)	106 (*a*) (*c*)	35	8	12	2	3	1	..	..	61
49*b*. Chronic Bronchitis (26*b*)	106 (*b*) (*d*)	53	65	31	20	6	10	..	..	185
50. Pneumonia and Broncho-Pneumonia (27)	107–109	564	614	206	128	139	67	..	1	1,719
51. Pleurisy (28)	110	18	8	8	2	3	..	..	..	39
52. Other Diseases of the Respiratory System (except Tuberculosis) (28)	104, 105, 111–114	124	96	66	61	23	21	1	..	392
53. Ulcer of the Stomach and Duodenum (32*b*)	117	48	33	17	6	10	2	..	..	116
54. Diarrhœa and Enteritis (under 2 years of age) (29*a*)	119	32	29	18	6	4	1	..	..	90
55. Diarrhœa and Enteritis (2 years and over) (29*b*)	120	31	28	16	10	12	7	..	..	104
56. Appendicitis (30)	121	53	36	23	9	10	1	..	..	132
57. Hernia, Intestinal Obstruction (32*a*)	122	133	101	33	27	20	14	..	..	328
58. Cirrhosis of the Liver (31*a*)	124	32	32	8	6	6	5	..	..	89
59. Other Diseases of the Liver and Biliary Passages including Biliary Calculi (31*b*)	125–127	99	97	43	17	22	12	..	..	290
60. Other Diseases of the Digestive Systems (32*b*)	*	50	47	29	14	11	14	..	..	165
61. Nephritis (33)	130–132	542	653	228	86	75	63	..	2	1,649
62. Other Diseases of the Kidneys and Ureters (34)	133	32	31	23	6	10	5	..	2	109
63. Calculi of the Urinary Passages (34)	134	10	7	11	..	2	..	..	..	30
64. Diseases of the Urinary Bladder (34)	135	1	7	6	..	1	1	..	1	17
65. Diseases of the Urethra, Urinary Abscess, &c. (34)	136	..	..	..	..	..	..	..	..	..
67. Diseases of the Genital Organs not specified as Venereal or connected with Pregnancy, &c. (34)	138, 139	33	21	7	14	5	3	..	..	83
68. Diseases and Accidents of Pregnancy (36)	142–145	28	17	24	6	9	6	..	..	90
69. Abortion, without mention of Infection (36)	141	5	5	..	2	2	1	..	..	15
70. Abortion, with mention of Infection (35*a*)	140	11	13	7	4	3	3	..	..	41
71. Infection during Child-birth and the Puerperium (35*b*)	147	19	18	9	6	3	1	..	..	56
72. Other Accidents and Diseases of Child-birth and the Puerperium (36)	146, 148–150	48	19	21	19	9	7	..	2	125
73. Diseases of the Skin and Cellular Tissue (37)	151–153	23	3	2	7	2	5	..	..	42
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37)	154–156	16	5	4	3	1	2	..	..	31
75. Congenital Malformations (Still-births not included) (38)	157	163	99	62	25	38	11	..	..	398
76. Congenital Debility (38)	158	19	16	5	6	6	1	..	..	53
77. Premature Birth (38)	159	286	183	133	68	61	35	..	2	768
78. Injury at Birth (38)	160	88	69	39	19	12	11	1	1	240
79. Other Diseases peculiar to the First Year of Life (38)	161	80	73	37	25	9	7	..	..	231
80. Senility (39)	162	539	392	164	148	71	38	..	3	1,355
81. Suicide (40)	163, 164	89	57	31	19	12	11	..	..	219
82. Homicide (41)	165–168	13	4	13	3	4	..	..	..	37
83. Automobile Accidents (42)	170	99	69	33	9	13	8	..	..	231
84. Other Violent or Accidental Deaths (43)	169, 171–195	357	139	160	90	68	35	3	..	852
85. Deaths due to Operations of War (43)	196, 197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43)	198	..	..	..	..	..	..	..	..	..
87. Ill-defined or Unspecified (44)	199, 200	25	16	23	12	..	1	..	1	78
Total Females	..	12,541	10,254	4,442	2,978	1,962	1,154	9	38	33,378

* No. 60 :—115, 116, 118, 123, 128, 129.

C.—CAUSES OF DEATH : PERSONS, 1946.

INTERMEDIATE CLASSIFICATION.

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust
1. Typhoid and Paratyphoid Fevers (1)	1, 2	3	2	1	..	3	..	..	..	9
2. Plague (2)	3	..	..	..	..	..	..	..		..
3. Scarlet Fever (3)	8	4	3	..	..	..	..	..	..	7
4. Whooping Cough (4)	9	44	11	15	3	1	..	..	..	74
5. Diphtheria (5)	10	57	17	20	8	11	6	..	..	119
6. Tuberculosis of the Respiratory System (6)	13	818	650	303	166	163	97	1	2	2,200
7a. Tubercular Meningitis (7a) ..	14 (a)	28	18	5	1	..	7	..	1	60
7b. Other Forms of Tuberculosis (7b)	14(b)–22	42	43	11	15	8	14	..	..	133
8. Septicæmia, Purulent Infection (Non-puerperal) (14) ..	24	15	15	2	7	4	3	..	..	46
9. Dysentery (14)	27	8	10	8	6	2	..	..	..	34
0. Malaria (8)	28	5	2	1	.	..	..	1	..	9
1. Syphilis (9)	30	125	103	50	26	32	8	..	..	344
2a. Influenza (Pneumonic) (8a) ..	33 (a)	37	34	36	3	6	3	..	1	120
2b. Influenza (Other) (8b) ..	33 (b)	31	18	22	5	9	6	..	..	91
3. Small-pox (11)	34	..	..	..	..	..	.	..	..	..
4. Measles (12)	35	37	13	12	15	30	2	..	..	109
5. Typhus Fever (13)	39	2	..	4	1	1	..	..	..	8
6. Diseases caused by Helminths (14)	40–42	9	23	3	4	3	5	..	..	47
7. Other Infectious and Parasitic Diseases (14)	*	176	107	63	27	32	20	..	..	425
8. Cancer of the Buccal Cavity and Pharynx (15)	45	137	83	47	25	29	9	..	..	330
9. Cancer of the Digestive Organs and Peritoneum (15) ..	46	1,699	1,425	587	386	265	148	1	5	4,516
0. Cancer of the Respiratory System (15)	47	219	188	72	51	49	22	1	..	602
1. Cancer of the Uterus (15) ..	48	244	179	87	58	37	24	..	1	630
2. Cancer of the Breast (15) ..	50	317	328	115	100	50	27	..	..	937
3. Cancer of other or unspecified Organs (15)	49, 51–55	796	635	283	200	119	67	1	2	2,103
4. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	182	116	77	37	37	8	..	..	457
5. Acute Rheumatic Fever (20) ..	58	60	8	21	12	11	11	..	1	124
6. Chronic Rheumatism and Gout (17)	59, 60	42	70	23	24	10	12	1	..	182
7. Diabetes Mellitus (18)	61	529	432	172	150	75	37	1	..	1,396
8. Diseases of the Thyroid and Parathyroid Glands (20).. ..	63	70	53	23	16	11	11	..	..	184
9. Other General Diseases (20) ..	62, 64–66	29	28	17	18	11	6	..	1	110
0. Avitaminoses (20)	67–71	..	..	..	..	1	1	..	..	2
1. Anæmias (20)	73	99	74	31	22	13	15	..	1	255
2. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74–76	130	77	59	43	23	10	..	..	342
3. Alcoholism (acute or chronic) (19)	77	52	16	31	8	2	..	..	..	109
4. Other Chronic Poisonings (20) ..	78, 79	3	6	4	..	..	..	..	..	13
5. Meningitis (Non-meningococcal) (21)	81	46	21	27	10	18	6	..	..	128
6. Diseases of the Spinal Cord (21) ..	82	75	45	25	25	11	4	..	..	185
7. Intra-cranial Lesions of Vascular Origin (22)	83	2,948	2,138	926	751	397	245	5	9	7,419
8. Mental Diseases and Deficiency (23)	84	47	19	24	6	6	4	..	..	106
9. Epilepsy (23)..	85	102	32	26	10	7	8	..	..	185
. Other Diseases of the Nervous System (23)	80, 86, 87	181	114	66	50	17	14	..	1	443
. Diseases of the Eye, Ear and their Annexa (23)	88, 89	20	14	9	15	2	..	..	..	60
. Pericarditis (24)	90	8	15	8	..	5	1	..	..	37
. Chronic Affections of the Valves and Endocardium (24) ..	92	513	403	207	137	73	53	..	1	1,387
. Diseases of the Myocardium (24)	93	5,460	3,931	1,869	1,041	791	314	2	14	13,422
. Diseases of the Coronary Arteries and Angina Pectoris (24) ..	94	2,814	1,964	971	628	377	211	1	9	6,975
. Other Diseases of the Heart (24)	91, 95	467	376	132	119	54	50	2	1	1,201
. Arteriosclerosis and Gangrene (25)	97, 98	557	520	122	143	175	67	..	1	1,585
. Other Diseases of the Circulatory System (25)	96, 99–103	171	122	96	34	55	30	2	..	510
a. Acute Bronchitis (26a) ..	106 (a)(c)	62	31	32	7	6	3	..	1	142

* No. 17 :—4–7, 11, 12, 23, 25, 26, 29, 31, 32, 36–38, 43, 44.

C.—CAUSES OF DEATH: PERSONS, 1946—*continued.*

INTERMEDIATE CLASSIFICATION.

(Figures in parenthesis indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A.C.T.	Aust.
49*b*. Chronic Bronchitis (26*b*) ..	106 (*b*) (*d*)	162	140	79	44	29	21	..	..	475
50. Pneumonia and Broncho-Pneumonia (27)	107–109	1,254	1,246	520	288	321	166	2	3	3,800
51. Pleurisy (28)	110	37	30	12	11	12	4	..	..	106
52. Other Diseases of the Respiratory System (except Tuberculosis) (28)	104, 105, 111–114	274	232	149	102	79	42	1	..	879
53. Ulcer of the Stomach and Duodenum (32*b*)	117	196	167	57	46	34	20	1	..	521
54. Diarrhœa and Enteritis (under 2 years of age) (29*a*)	119	66	72	45	20	9	2	..	..	214
55. Diarrhœa and Enteritis (2 years and over) (29*b*)	120	80	46	32	22	19	10	..	..	209
56. Appendicitis (30)	121	138	86	62	23	23	6	..	..	338
57. Hernia, Intestinal Obstruction (32*a*)	122	266	179	102	54	48	25	..	1	675
58. Cirrhosis of the Liver (31*a*) ..	124	94	94	45	25	19	9	2	..	288
59. Other Diseases of the Liver and Biliary Passages including Biliary Calculi (31*b*) ..	125–127	145	152	70	26	30	17	..	..	440
60. Other Diseases of the Digestive System (32*b*)	*	114	99	63	40	32	22	..	..	370
61. Nephritis (33)	130–132	1,235	1,301	515	208	170	132	..	2	3,563
62. Other Diseases of the Kidneys and Ureters (34)	133	69	60	58	14	22	13	..	3	239
63. Calculi of the Urinary Passages (34)	134	26	27	28	3	7	..	..	1	92
64. Diseases of the Urinary Bladder (34)	135	8	17	13	5	7	5	..	1	56
65. Diseases of the Urethra, Urinary Abscess, etc. (34)	136	8	6	4	2	1	..	..	..	21
66. Diseases of the Prostate (34) ..	137	191	194	88	46	47	28	1	1	596
67. Diseases of the Genital Organs not specified as Venereal or connected with Pregnancy, etc. (34)	138, 139	34	21	7	14	5	3	..	..	84
68. Diseases and Accidents of Pregnancy (36)	142–145	28	17	24	6	9	6	..	..	90
69. Abortion, without mention of Infection (36)	141	5	5	..	2	2	1	..	..	15
70. Abortion, with mention of Infection (35*a*)	140	11	13	7	4	3	3	..	..	41
71. Infection during Child-birth and the Puerperium (35) ..	147	19	18	9	6	3	1	..	..	56
72. Other Accidents and Diseases of Child-birth and the Puerperium (36)	146, 148–150	48	19	21	19	9	7	..	2	125
73. Diseases of the Skin and Cellular Tissue (37)	151–153	48	8	8	12	2	6	..	..	84
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37)	154–156	35	13	8	5	3	5	..	..	69
75. Congenital Malformations (Still-births not included) (38) ..	157	353	205	123	60	68	25	1	1	836
76. Congenital Debility (38) ..	158	43	27	15	12	9	3	..	..	109
77. Premature Birth (38)	159	679	391	313	150	134	81	2	5	1,755
78. Injury at Birth (38)	160	245	161	93	44	36	29	1	1	610
79. Other Diseases peculiar to the First Year of Life (38) ..	161	222	155	88	51	29	25	..	1	571
80. Senility (39)	162	1,057	706	351	261	122	56	2	3	2,558
81. Suicide (40)	163, 164	279	185	127	58	58	23	2	..	732
82. Homicide (41)	165–168	37	12	23	8	8	1	1	..	90
83. Automobile Accidents (42) ..	170	442	347	170	84	106	53	3	1	1,206
84. Other Violent or Accidental Deaths (43)	169, 171–195	1,031	506	523	225	196	108	14	3	2,606
85. Deaths due to Operations of War (43)	196–197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43)	198	..	..	..	1	..	1	..	..	2
87. Ill-defined or Unspecified (44) ..	199, 200	80	45	51	47	..	1	3	1	228
Total	..	28,579	21,534	10,648	6,461	4,753	2,549	55	82	74,661

* No. 60 :—115, 116, 118, 123, 128, 129.

D.—CAUSES OF DEATH : PERSONS, AUSTRALIA.

ABRIDGED CLASSIFICATION.

Abridged Classification.	General Classification Numbers.	1942.	1943.	1944.	1945.	1946.	1946—Rate per 1,000,000 Population.
1. Typhoid and Paratyphoid Fevers	1, 2	26	46	18	11	9	1
2. Plague	3	..	..	..	..	..	..
3. Scarlet Fever	8	22	52	27	11	7	1
4. Whooping Cough	9	187	203	61	84	74	10
5. Diphtheria	10	240	277	181	183	119	16
6. Tuberculosis of the Respiratory System ..	13	2,864	2,272	2,165	2,186	2,200	295
7a. Tubercular Meningitis	14 (a)	76	82	64	65	60	8
7b. Other Tuberculous Diseases	14b–22	178	186	158	162	133	18
8. Malaria	28	14	21	8	10	9	1
9. Syphilis	30	400	444	398	334	344	46
10a. Influenza—Pneumonic	33 (a)	355	249	72	93	120	16
10b. Influenza—Other	33 (b)	201	192	108	69	91	12
11. Small-pox	34	..	..	..	..	..	..
12. Measles	35	245	107	11	25	109	15
13. Typhus Fever	39	6	12	11	14	8	1
14. Other Infective and Parasitic Diseases ..	*	892	742	544	484	552	74
15. Cancer and other Malignant Tumours ..	45–55	8,491	8,870	8,571	8,937	9,118	1,221
16. Non-malignant Tumours or Tumours of Undetermined Nature	56, 57	397	456	461	421	457	61
17. Chronic Rheumatism and Gout	59, 60	188	163	143	162	182	24
18. Diabetes Mellitus	61	1,444	1,504	1,294	1,306	1,396	187
19. Chronic or Acute Alcoholism	77	88	67	75	65	109	15
20. Other General Diseases	*	1,054	1,065	1,047	1,035	1,030	138
21. Non-meningococcal Meningitis and diseases of the Spinal Cord	81, 82	438	421	375	335	313	42
22. Intra-cranial Lesions of Vascular Origin ..	83	6,750	6,721	6.755	7,071	7,419	993
23. Other Diseases of the Nervous System and Sense Organs	80, 84–89	862	914	807	813	794	106
24. Diseases of the Heart	90–95	21,002	21,237	20,411	21,441	23,022	3,082
25. Other Diseases of the Circulatory System ..	96–103	2,022	1,974	1,958	1,907	2,095	281
26a. Acute Bronchitis	106 (a)(c)	216	178	150	147	142	19
26b. Chronic Bronchitis	106 (b)(d)	556	545	464	474	475	64
27. Pneumonia and Broncho-pneumonia ..	107–109	4,173	4,270	3,596	3,381	3,800	509
28. Other Diseases of the Respiratory System ..	*	1,069	950	966	951	985	132
29a. Diarrhœa and Enteritis (under two years of age)	119	441	395	292	234	214	29
29b. Diarrhœa and Enteritis (two years and over)	120	359	370	251	266	209	28
30. Appendicitis	121	448	384	380	315	338	45
31a. Cirrhosis of the Liver	124	298	297	256	233	288	39
31b. Other Diseases of the Liver and Biliary Calculi	125–127	447	483	433	462	440	59
32a. Hernia, Intestinal Obstruction	122	645	641	706	648	675	90
32b. Other Diseases of the Digestive System ..	*	1,035	1,019	959	865	891	119
33. Nephritis	130–132	3,893	3,913	3,495	3,450	3,563	477
34. Other Diseases of the Genito-urinary System	133–139	1,351	1,269	1,143	1,059	1,088	146
35a. Post-abortive Sepsis	140	99	114	81	52	41	6
35b. Puerperal Infection	147	90	94	68	50	56	7
36. Other Diseases of Pregnancy, Child-birth and the Puerperium	141–146, 148–150	302	289	288	244	230	31
37. Diseases of the Skin, Bones, etc.	151–156	241	247	229	154	153	20
38. Congenital Debility, Malformations, Premature Birth, etc.	157–161	3,604	3,732	3,564	3.587	3,881	520
39. Senility	162	2,899	2,888	2,493	2,546	2,558	342
40. Suicide	163, 164	594	516	540	567	732	98
41. Homicide	165–168	95	75	106	77	90	12
42. Automobile Accidents	170	961	763	751	754	1,206	161
43. Other Accidental or Violent Deaths ..	169, 171–198	2,651	2,522	2,438	2,296	2,608	349
44. Unstated or Ill-defined Causes	199, 200	282	255	224	195	228	31
Total	..	75,191	74,486	69,596	70,231	74,661	9,997

* No. 14 :—4–7, 11, 12, 23–27, 29, 31, 32, 36–38, 40–44 ; No. 20 :—58, 62–76, 78, 79 ; No. 28 :—104, 105, 110–114 ; No. 32b :—115–118, 123, 128, 129.

NOTE.—All causes of death have been classified in accordance with the 1938 revision of the International List.

E.—CAUSES OF DEATH : PERSONS, AUSTRALIA, NUMBER AND RATES.

ABRIDGED CLASSIFICATION.

Abridged Classification.	General Classification Numbers.	Number of Deaths.			Average Rate per 1,000,000 of Population.		
		1931–35.	1936–40.	1941–45.	1931–35.	1936–40.	1941–45.
1. Typhoid and Paratyphoid Fevers	1, 2	379	231	116	12	7	3
2. Plague	3	..	..	..	..	..	..
3. Scarlet Fever	8	331	180	137	10	5	4
4. Whooping Cough	9	1,186	927	766	36	27	21
5. Diphtheria	10	2,083	1,605	1,186	63	47	33
6. Tuberculosis of the Respiratory System ..	13	13,221	12,194	11,677	400	354	323
7a. Tubercular Meningitis	14 (a)	618	453	351	19	13	10
7b. Other Tuberculous Diseases	14 (b)–22	1,016	882	864	31	26	24
8. Malaria	28	97	58	58	3	2	2
9. Syphilis	30	1,600	1,822	2,006	48	53	55
10a. Influenza—Pneumonic	33 (a)	2,859	1,913	967	86	55	27
10b. Influenza—Other	33 (b)	1,326	819	717	40	24	20
11. Small-pox	34	1	1	..	..	..	..
12. Measles	35	391	390	407	12	11	11
13. Typhus Fever	39	15	30	50	1	1	1
14. Other Infective and Parasitic Diseases ..	*	2,649	2,577	3,387	80	75	94
15. Cancer and other Malignant Tumours ..	45–55	34,825	39,477	43,347	1,053	1,145	1,198
16. Non-malignant Tumours or Tumours of Undetermined Nature	56, 57	1,817	2,188	2,152	55	63	59
17. Chronic Rheumatism and Gout	59, 60	847	835	814	26	24	23
18. Diabetes Mellitus	61	5,095	5,953	6,934	154	173	192
19. Chronic or Acute Alcoholism	77	235	331	390	7	10	11
20. Other General Diseases	*	5,437	5,792	5,313	164	168	147
21. Non-meningococcal Meningitis and Diseases of the Spinal Cord	81, 82	1,371	1,773	1,958	42	51	54
22. Intra-cranial Lesions of Vascular Origin ..	83	22,395	26,138	33,574	676	758	928
23. Other Diseases of the Nervous System and Sense Organs	80, 84–89	4,600	4,127	4,195	139	120	116
24. Diseases of the Heart	90–95	60,227	78,670	103,176	1,817	2,282	2,852
25. Other Diseases of the Circulatory System ..	96–103	7,380	10,182	9,643	223	295	267
26a. Acute Bronchitis	106 (a) (c)	1,078	921	892	33	27	25
26b. Chronic Bronchitis	106 (b) (d)	2,966	2,662	2,589	90	77	71
27. Pneumonia and Broncho-pneumonia ..	107–109	20,157	21,125	19,868	608	613	549
28. Other Diseases of the Respiratory System ..	*	5,045	5,021	5,004	152	146	138
29a. Diarrhœa and Enteritis (under two years of age)	119	2,043	1,855	1,752	62	54	48
29b. Diarrhœa and Enteritis (two years and over)	120	1,922	1,598	1,537	58	46	42
30. Appendicitis	121	2,680	2,641	1,974	81	77	55
31a. Cirrhosis of the Liver	124	1,321	1,501	1,415	40	44	39
31b. Other Diseases of the Liver and Biliary Calculi	125–127	2,326	2,388	2,275	70	69	63
32a. Hernia, Intestinal Obstruction	122	2.792	2,911	3,241	84	84	90
32b. Other Diseases of the Digestive System ..	*	4,404	4,896	4,955	133	142	137
33. Nephritis	130–132	17,754	19,206	18,634	536	557	515
34. Other Diseases of the Genito-urinary System	133–139	5,388	6,056	6,055	163	176	167
35a. Post-abortive Sepsis	140	761	763	452	23	22	12
35b. Puerperal Infection	147	466	393	393	14	11	11
36. Other Diseases of Pregnancy, Child-birth and the Puerperium	141–146, 148–150	1,833	1,071	1,416	56	48	39
37. Diseases of the Skin, Bones, etc.	151–156	1,696	1,669	1,144	51	48	32
38. Congenital Debility, Malformation, Premature Birth, etc.	157–161	15,909	16,498	18,290	481	478	505
39. Senility	162	14,021	13,757	13,312	424	399	368
40. Suicide	163, 164	3.988	3,780	2,841	121	110	79
41. Homicide	165–168	530	459	413	16	13	11
42. Automobile Accidents	170	4,372	6.862	4,384	132	199	121
43. Other Accidental or Violent Deaths ..	169, 171–198	11,267	12,998	12,475	340	377	345
44. Unstated or Ill-defined Causes	199, 200	1,542	1,224	1.184	46	35	33
Total	..	298,262	332,410	360,680	9,011	9,641	9,970

* No. 14 :—4–7, 11, 12, 23–27, 29, 31, 32, 36–38, 40–44 ; No. 20 :—58, 62–76, 78, 79 ; No. 28 :—104, 105, 110–114 ; No. 32b :—115–118, 123, 128, 129.

NOTE.—All causes of death have been classified in accordance with the 1938 revision of the International List.

16. **Deaths from Principal Specific Causes.**—(i) *General.* In the preceding tables particulars have been given for each of the causes of death comprising the Intermediate and the Abridged Classifications. The more important of these causes are treated in detail hereunder. The Intermediate Classification number is indicated in parenthesis for each cause or group of causes.

(ii) *All Forms of Tuberculosis* (6, 7).—(*a*) *General.* The total number of deaths in 1946 was 2,393, consisting of 1,550 males and 843 females.

(*b*) *Age at Death.* The following table shows the age-groups of males, females and persons who died from this disease in 1946, together with comparable figures for 1921, 1931 and 1941.

TUBERCULOSIS (ALL FORMS) : DEATHS IN AGE-GROUPS, AUSTRALIA.

Age-group (Years).	1921.			1931.			1941.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons
Under 5 ..	90	76	166	57	47	104	42	28	70	32	37	69
5–9 ..	30	28	58	14	14	28	12	10	22	8	6	14
10–14 ..	23	24	47	19	20	39	9	16	25	8	5	13
15–19 ..	72	100	172	45	105	150	30	52	82	22	39	61
20–24 ..	173	194	367	113	183	296	69	91	160	46	81	127
25–29 ..	232	246	478	136	199	335	63	132	195	44	116	160
30–34 ..	237	195	432	191	164	355	125	129	254	93	110	203
35–39 ..	247	178	425	187	156	343	144	111	255	103	90	193
40–44 ..	234	141	375	207	102	309	159	79	238	128	67	195
45–49 ..	223	102	325	197	83	280	180	76	256	155	64	219
50–54 ..	179	69	248	185	62	247	216	64	280	187	59	246
55–59 ..	172	65	237	164	57	221	210	52	262	199	37	236
60–64 ..	118	42	160	128	50	178	187	59	246	198	41	239
65–69 ..	79	32	111	110	38	148	137	39	176	151	42	193
70–74 ..	35	10	45	52	31	83	74	41	115	93	20	113
75–79 ..	18	7	25	27	16	43	48	18	66	54	14	68
80 and over ..	6	7	13	4	4	8	20	12	32	29	15	44
Unspecified ..	3	..	3	..	..	..	..	..	..	..	..	..
Total ..	2,171	1,516	3,687	1,836	1,331	3,167	1,725	1,009	2,734	1,550	843	2,393

(*c*) *Occupation at Death, Males.* A summary of the main groups of occupations of males who died from tuberculosis during 1946 is given in *Demography Bulletin*, No. 64.

(*d*) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tuberculosis in 1946 is given in the next table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULOSIS (ALL FORMS), 1946.

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.	Male.	Fem.	Total.
Born in Australia ..	1,216	760	1,976	Resident 10–14 years ..	6	3	9
Resident under 1 year ..	1	..	1	,, 15–19 ,, ..	17	15	32
,, 1 year	..	..	..	,, 20 years & over ..	232	50	282
,, 2 years ..	1	..	1	Length of residence not stated	70	13	83
,, 3 ,, ...	1	..	1				
,, 4 ,, ...	2	..	2				
,, 5–9 years ..	4	2	6	Total Deaths ..	1,550	843	2,393

(*e*) *Death-rates.* In order to show the relative incidence of tuberculosis in each State and Territory and the improvement which has taken place in recent years the death-rates from tubercular diseases for 1931, 1941 and 1946 are given in the following table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

TUBERCULOSIS (ALL FORMS) : DEATH-RATES (*a*)

State or Territory.	1931.			1941.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	53	37	45	47	24	36	40	21	31
Victoria ..	59	51	55	54	37	45	44	27	35
Queensland ..	45	28	37	40	20	30	41	17	30
South Australia ..	58	56	57	40	34	37	37	21	29
Western Australia	74	40	58	60	25	44	48	21	35
Tasmania ..	61	51	56	48	44	46	53	42	48
Northern Territory	69	..	44	27	35	29	25	..	19
Australian Capital Territory ..	21	25	23	..	15	7	28	13	21
Australia ..	55	42	49	48	29	38	42	23	33

(*a*) Number of deaths from tuberculosis per 100,000 of mean population.

(*f*) *Proportion of Total Deaths.* The following table shows the number of deaths from tuberculosis per 10,000 deaths from all causes in each State and Territory during 1911–20, 1921–30, 1931–40 and 1946. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

TUBERCULOSIS (ALL FORMS) : PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	1911–20.			1921–30.			1931–40.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
N.S. Wales ..	670	625	651	599	536	572	476	378	434	361	246	311
Victoria ..	718	754	735	695	663	680	485	448	468	387	268	330
Queensland ..	559	480	529	516	406	472	413	323	377	367	205	300
South Australia	757	889	816	713	758	733	498	482	491	333	222	282
Western Australia ..	895	728	835	869	643	786	598	401	523	438	250	360
Tasmania ..	646	757	697	640	749	691	537	548	542	473	451	463
Northern Territory ..	1,441	745	1,357	1,170	685	1,115	272	541	314	217	..	182
Australian Capital Territory	323	417	364	116	349	194	217	419	293	455	263	366
Australia ..	691	684	688	644	594	622	482	410	450	375	253	320

(*g*) *Death-rates, Various Countries.* The following table shows the death-rates from tuberculosis for Australia and each State in comparison with the rates for various other countries. Figures for years later than 1939 are not given as they are based on population estimates whose comparability is open to doubt because of the abnormal distribution of population during war-time. The table indicates that Australia occupies a very favourable position as regards the death-rate from this disease.

TUBERCULOSIS : DEATH-RATES (*a*), VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.
Union of South Africa (Europeans)	1939	27	33
Australia (*b*)	**1939**	**35**	**39**
Queensland (*b*)	1939	29	30
New South Wales (*b*)	1939	34	37
South Australia (*b*)	1939	35	38
Western Australia b	1939	39	41
Victoria (*b*)	1939	40	45
Tasmania (*b*)	1939	43	53
New Zealand (*c*)	1939	34	40
U.S. of America	1939	43	47
Denmark	1936	37	47
Netherlands	1936	36	50
Canada	1939	44	53
Egypt	1936	45	56
Ceylon	1937	55	(*d*)
Great Britain and Northern Ireland	1939	53	63
England and Wales	1939	52	62
Scotland	1939	54	70
Northern Ireland	1939	66	84
Belgium	1936	56	72
Germany	1935	62	73
Italy	1938	59	80
Switzerland	1939	73	95
Norway	1937	78	98
Sweden	1939	85	103
Spain	1935	(*d*)	107
Eire	1939	89	113
France	1934	109	126
Greece	1936	104	128
Czechoslovakia	1936	114	129
Japan	1936	105	142
Portugal	1939	119	144
Hungary	1939	127	152
Poland (*e*)	1937	135	153
Finland	1937	179	210

(*a*) Number of deaths per 100,000 of mean population. (*b*) Excluding full-blood aboriginals. (*c*) Excluding Maoris. (*d*) Not available. (*e*) In towns with over 100,000 inhabitants.

(iii) *Cancer and other Malignant Tumours* (18 *to* 23).—(*a*) *General.* The number of deaths from cancer increased continuously to 6,256 in 1929, declined slightly to 6,120 in 1930, but rose again progressively to 9,118 in 1946.

(*b*) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age and with conjugal condition of the persons dying from cancer in 1945 and 1946, will be found in *Demography Bulletin*, Nos. 63 to 64. A summary regarding type and seat of disease for 1946 is given below. It may be pointed out that the significance of the number of deaths shown for the various types of cancer enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

DEATHS FROM CANCER: TYPE AND SEAT OF DISEASE, AUSTRALIA, 1946.

Type of Disease.	Males.	Females.	Persons.
Cancer	255	288	543
Carcinoma—			
Carcinoma Simplex	3,746	3,767	7,513
Epithelioma ..	120	55	175
Scirrhus ..	3	25	28
Rodent Ulcer ..	30	9	39
Adeno-Carcinoma	25	39	64
Colloid Carcinoma	..	..	..
Sarcoma—			
Sarcoma ..	150	133	283
Myeloid Sarcoma	..	1	1
Myeloma ..	7	2	9
Glioma ..	14	15	29
Adeno-Sarcoma ..	2	1	3
Chloroma ..	1	..	1
Endothelioma ..	2	4	6
Melanoma—			
Melanoma ..	25	20	45
Melanotic Sarcoma	8	13	21
Melano-Carcinoma	..	1	1
Embryonic Tumours—			
Hypernephroma	23	14	37
Teratoma ..	1	1	2
Malignant Disease ..	114	95	209
Malignant Tumour	54	55	109
Total Deaths	4,580	4,538	9,118

Seat of Disease.	Males.	Females.	Persons.
Buccal Cavity and Pharynx ..	278	52	330
Digestive Organs and Peritoneum—			
Stomach and Duodenum ..	1,128	691	1,819
Rectum and Anus ..	303	196	499
Colon ..	360	403	763
Other ..	769	666	1,435
Respiratory System	464	138	602
Uterus	..	630	630
Other Female Genital Organs ..	..	278	278
Breast	7	930	937
Male Genital Organs	489	..	489
Urinary Organs ..	263	134	397
Skin	180	95	275
Brain and Nervous System ..	38	30	68
Other or Unspecified Organs	301	295	596
Total Deaths	4,580	4,538	9,118

(c) *Age at Death.* The ages of persons who died from cancer in 1921, 1931, 1941 and 1946 are given below. Inferences drawn from the great increase in the number of deaths from cancer in 1946 compared with 1921, need qualification in view of the altered age constitution of the population since the earlier year. The number of people reaching the older ages at which cancer risks are greatest has more than doubled in the last twenty years, and it is only in the extreme old age-groups from 75 onwards that the rate of mortality has definitely increased. For groups up to age 75 there has been no increase in mortality rates since 1921. In the higher age-groups the increase in the rate for females has been relatively greater than that in the rate for males. It is also probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to more correct diagnosis and certification on the part of medical practitioners rather than to any actual increase in the disease itself.

CANCER : DEATHS IN AGE-GROUPS, AUSTRALIA.

Age-group (Years).	1921.			1931.			1941.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Under 15 ..	26	23	49	25	23	48	21	25	46	25	19	44
15–19 ..	8	11	19	12	11	23	10	10	20	12	10	22
20–24 ..	6	7	13	12	14	26	15	13	28	13	17	30
25–29 ..	15	19	34	19	13	32	24	22	46	25	23	48
30–34 ..	26	45	71	26	55	81	28	45	73	30	57	87
35–39 ..	56	81	137	59	98	157	56	106	162	55	113	168
40–44 ..	81	140	221	111	173	284	92	193	285	92	150	242
45–49 ..	147	207	354	149	261	410	149	282	431	200	273	473
50–54 ..	240	263	503	261	287	548	316	403	719	310	430	740
55–59 ..	358	308	666	349	344	693	425	435	860	491	526	1,017
60–64 ..	442	349	791	519	400	919	558	491	1,049	628	584	1,212
65–69 ..	380	285	665	662	478	1,140	670	558	1,228	726	599	1,325
70–74 ..	312	234	546	609	410	1,019	753	623	1,376	738	614	1,352
75–79 ..	212	215	427	397	294	691	676	512	1,188	667	557	1,224
80–84 ..	83	89	172	187	152	339	331	330	661	371	356	727
85 and over ..	45	52	97	87	92	179	131	175	306	197	210	407
Unspecified ..	3	..	3	..	..	..	..	..	..	..	..	..
Total ..	2,440	2,328	4,768	3,484	3,105	6,589	4,255	4,223	8,478	4,580	4,538	9,118

(*d*) *Occupation at Death, Males.* A table showing main groups of occupations of males who died from cancer during 1946 appears in *Demography Bulletin*, No. 64.

(*e*) *Death-rates.* The following table shows the death-rates per 100,000 of mean population from cancer in each State for 1931, 1941 and 1946. The substantial increase in the death-rate since 1931 is reflected in both sexes and in all States. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

CANCER : DEATH-RATES. (*a*)

State or Territory.	1931.			1941.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	99	95	97	116	107	112	119	117	118
Victoria ..	111	106	109	132	145	138	135	147	141
Queensland ..	105	77	92	100	97	99	116	104	110
South Australia ..	112	124	118	112	140	126	134	127	130
Western Australia	110	81	97	135	110	123	117	107	112
Tasmania ..	100	100	100	125	127	126	124	116	120
Northern Territory	69	119	87	54	35	49	50	85	58
Australian Capital Territory ..	21	51	35	25	61	41	56	54	55
Australia ..	105	97	101	119	120	119	124	123	124

(*a*) Number of deaths from cancer per 100,000 of mean population.

(*f*) *Proportion of Total Deaths.* While the death-rate from all causes has diminished substantially in recent years, the rate from cancer has risen almost continuously, the result being that out of 10,000 deaths from all causes, 1,221 were due to cancer in 1946 compared with 735 per 10,000 total deaths during the period 1911–20. The following table shows the proportions recorded in each State and Territory for 1911–20, 1921–30, 1931–40 and 1946. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

CANCER : PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	1911–20.			1921–30.			1931–40.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
N.S. Wales ..	674	806	729	900	1,070	973	1,060	1,271	1,152	1,072	1,350	1,194
Victoria ..	681	870	767	943	1,145	1,037	1,115	1,353	1,226	1,189	1,460	1,318
Queensland ..	611	741	661	866	1,009	922	1,066	1,138	1,095	1,041	1,227	1,118
South Australia	736	876	800	1,021	1,137	1,074	1,207	1,441	1,315	1,197	1,353	1,269
Western Australia ..	612	802	680	873	1,112	961	1,098	1,241	1,152	1,064	1,285	1,155
Tasmania ..	664	836	743	842	1,014	922	1,040	1,252	1,136	1,104	1,239	1,165
Northern Territory ..	335	426	346	621	137	565	645	811	671	435	1,111	545
Australian Capital Territory	806	625	727	233	349	271	544	898	677	909	1,053	975
Australia ..	667	826	735	912	1,091	990	1,089	1,292	1,178	1,109	1,359	1,221

(*g*) *Death-rates, Various Countries.* The following table shows the death-rates from cancer for Australia and each State in comparison with the rates for various other countries. Figures for years later than 1939 are not given as they are based on population estimates whose comparability is open to doubt because of the abnormal distribution of population during war-time.

CANCER : DEATH-RATES (*a*), VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Ceylon	1937	10	**Australia**—*continued.*		
Egypt	1936	26	*Tasmania*(*c*) ..	1939	114
Portugal	1939	47	*South Australia*(*c*) ..	1939	118
Japan	1936	48	*Victoria*(*c*) ..	1939	133
Greece	1936	50	New Zealand(*d*) ..	1939	118
Spain	1935	68	U.S. of America ..	1939	122
Italy	1938	86	Czechoslovakia ..	1936	126
France	1934	96	Eire	1939	127
Hungary	1939	96	Norway	1937	131
Finland	1936	100	Netherlands ..	1936	131
Poland (*b*)	1936	104	Sweden	1937	133
Union of South Africa (Europeans) ..	1939	105	Denmark	1939	143
Belgium	1936	110	Germany	1935	145
Canada	1939	110	Switzerland ..	1939	157
Australia(*c*)	**1939**	**116**	Great Britain and Northern Ireland ..	1939	161
Queensland(*c*) ..	1939	100	*Northern Ireland* ..	1939	133
Western Australia(*c*)	1939	105	*Scotland* ..	1939	161
New South Wales(*c*)	1939	113	*England and Wales*	1939	162

(*a*) Number of deaths per 100,000 of mean population. (*b*) In towns with over 100,000 inhabitants. (*c*) Excluding full-blood aboriginals. (*d*) Excluding Maoris.

(*h*) *Comparison with Tuberculosis.* In recent years the death-rate from tuberculosis has shown a tendency to decrease, while that from cancer has displayed an almost continuous increase. The table hereunder shows that for each of the periods under review the decline in the death-rate from tuberculosis has been accompanied by an almost equal increase in the rate for cancer. Thus in the forty-five years comprised in the five-yearly averages shown below the death-rate for tuberculosis declined by 57 while the rate of cancer increased by 57 per 100,000 persons. This equal but opposite tendency may be demonstrated by stating that the death-rate from tuberculosis and cancer combined remained almost constant in each period, the figures being :—1901–05, 152 deaths per 100,000 persons ; 1906–10, 145 ; 1911–15, 152 ; 1916–20, 154 ; 1921–25, 153 ; 1926–30, 152 ; 1931–35, 150 ; 1936–40, 154 ; 1941–45, 152 ; and 1946, 157.

TUBERCULOSIS AND CANCER : DEATH-RATES(*a*), AUSTRALIA.

Period.	Death-rate from Tuberculosis.			Death-rate from Cancer.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1901–05 ..	100	77	89	64	61	63
1906–10 ..	81	69	75	71	70	70
1911–15 ..	84	69	77	75	74	75
1916–20 ..	84	59	71	86	80	83
1921–25 ..	71	52	62	93	88	91
1926–30 ..	64	49	57	97	94	95
1931–35 ..	52	37	45	108	102	105
1936–40 ..	47	31	39	116	113	115
1941–45 ..	45	26	36	118	131	120
1946.. ..	42	23	33	124	123	124

(*a*) Number of deaths per 100,000 of mean population.

(iv) *Diseases of the Heart* (42 *to* 46). The number of deaths in 1946 was 23,022, namely, 13,602 males and 9,420 females. Details for each individual disease of the heart may be obtained from *Demography Bulletin*, No. 64. The sex and territorial distribution of the deaths will be found in the table below. This class is the largest among causes of death, the death-rate having grown from 1,019 per million in 1911–15 to 2,705 in 1939–43 and 3,083 in 1946. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past sixteen years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners. Many deaths of elderly people, formerly attributed to senility or other indefinite causes, are believed to be now more frequently certified as associated with some form of heart disease, usually myocardial degeneration. The improvement in diagnosis has been particularly evident in the case of diseases of the coronary arteries. As a result of a change of classification adopted in 1931, all forms of this disease have been included since that year among heart diseases. Although deaths recorded from diseases of the coronary arteries were not numerically important in 1931, this type of disease has since become prominent in medical science, and in 1946 the number of deaths assigned to this cause was 6,609, an increase of 6,045, or over 970 per cent., since 1931. The number of deaths, death-rates and proportions per 10,000 deaths in 1946 are given in the following table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

DISEASES OF THE HEART : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS, 1946.

State or Territory.	Number of Deaths.			Death-rates.(*a*)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	5,555	3,707	9,262	384	256	320	3,464	2,956	3,241
Victoria ..	3,768	2,921	6,689	380	286	333	3,340	2,849	3,106
Queensland ..	1,957	1,230	3,187	353	235	296	3,153	2,769	2,993
South Australia ..	1,097	828	1,925	353	261	306	3,150	2,780	2,979
Western Australia	833	467	1,300	328	198	265	2,984	2,380	2,735
Tasmania ..	370	259	629	297	210	254	2,652	2,244	2,468
Northern Territory	5	..	5	124	..	96	1,087	..	909
Australian Capital Territory ..	17	8	25	237	107	171	3,864	2,105	3,049
Australia ..	13,602	9,420	23,022	368	256	312	3,295	2,822	3,083

(*a*) Number of deaths from diseases of the heart per 100,000 of mean population.

(v) *Diarrhœa and Enteritis (Children under two years of age)* (54). The number of deaths due to these causes was 214 in 1946, which is a substantial decrease on the average of 350 for the previous five years. During 1946, 5,627 children died before reaching their second birthday, and of these 3.8 per cent., died from diarrhœa and enteritis. The ages of children dying from these diseases during the first year of life will be found on page 776.

The number of deaths under 2 years of age due to diarrhœa and enteritis, the death-rates, and proportions per 10,000 deaths for 1911–15, 1921–25, 1931–35, 1936–40, 1941–45 and 1946 are given in the following table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63. Reference to the last five lines of the table will reveal the very satisfactory decrease in the number of deaths due to these diseases. In view of changed birth-rates, however, the death-rates per 100,000 of mean population are not true measures of changes in the force of mortality. A better measure would be the estimated number of children in every 1,000 born who died from these diseases before reaching their second birthday. The numbers are estimated to be as follows :—

Period—	1911–15	Males,	24.6	Females,	20.9	Total,	22.8
„	1921–25	„	16.5	„	13.3	„	14.9
„	1931–35	„	3.7	„	2.8	„	3.3
„	1936–40	„	3.4	„	2.7	„	3.0
„	1941–45	„	2.7	„	2.1	„	2.4

DIARRHŒA AND ENTERITIS (UNDER 2 YEARS OF AGE) : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	Number of Deaths.			Death-rates.(*a*)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	34	32	66	2	2	2	21	26	23
Victoria ..	43	29	72	4	3	4	38	28	33
Queensland ..	27	18	45	5	3	4	43	40	42
South Australia ..	14	6	20	5	2	3	40	20	31
Western Australia	5	4	9	2	2	2	18	20	19
Tasmania ..	1	1	2	1	1	1	7	9	8
Northern Territory	..	..	..	..	..	..	..	..	..
Australian Capital Territory ..	..	..	..	..	..	..	..	..	..
Australia 1946 ..	124	90	214	3	3	3	30	27	29
Annual Average—									
1911–15 ..	1,687	1,354	3,041	68	59	64	569	627	593
1921–25 ..	1,114	859	1,973	38	31	35	362	366	364
1931–35 ..	234	175	409	7	5	6	70	68	69
1936–40 ..	212	159	371	6	5	5	57	54	56
1941–45 ..	200	150	350	5	4	5	51	46	49

(*a*) Number of deaths from these diseases per 100,000 of mean population.

(vi) *Puerperal Causes* (68 to 72). The 327 deaths in 1946 from puerperal causes correspond to a death-rate of 9.0 per 100,000 females. The rate is also equivalent to 1.85 deaths per 1,000 live births. The death-rate may be expressed in other terms by stating that 1 of every 533 women giving birth to a live child in 1946 died from puerperal causes ; the corresponding ratios for married women were 1 of every 551, and for single women 1 in every 315. More detailed information will be found in a series of tables in *Demography Bulletin*, No. 64.

The following table shows the death-rate per 1,000 live births from puerperal causes in various countries. Care is needed in comparing the Australian rates with the figures for other countries. In the rates for the States and Australia deaths from criminal abortion have been excluded from puerperal infection but included with deaths from other puerperal causes and in the total. Definite information is not available as to the practice in other countries but it is very probable that the rates for many of the countries given hereunder totally exclude deaths from criminal abortion.

CHILD-BIRTH : DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Infection.	Other Puerperal Causes.	All Puerperal Causes.
Sweden	1944	0.36	1.20	1.56
Australia (*a*)	**1946**	**0.41**	**1.44**	**1.85**
Victoria (*a*)	1946	0.47	1.07	1.54
New South Wales (*a*)	1946	0.31	1.34	1.65
Western Australia (*a*)	1946	0.25	1.90	2.15
Queensland (*a*)	1946	0.59	1.67	2.26
South Australia (*a*)	1946	0.51	1.83	2.34
Tasmania (*a*)	1946	0.44	2.19	2.63
Great Britain and Northern Ireland	1945	0.55	1.44	1.99
England and Wales	1945	0.50	1.35	1.85
Northern Ireland	1945	0.66	2.03	2.69
Scotland	1945	0.92	1.94	2.86
Denmark	1945	0.51	1.56	2.07
New Zealand (*b*)	1943	1.05	1.16	2.21
Switzerland	1945	0.46	1.81	2.27
United States of America	1944	0.81	1.47	2.28
Canada	1945	0.80	1.49	2.29
Japan	1936	0.64	1.67	2.31
Italy	1938	0.83	1.60	2.43
Union of South Africa (Europeans)	1941	0.84	1.65	2.49
France	1934	1.00	1.50	2.50
Norway	1937	1.18	1.65	2.83
Belgium	1946	1.60	3.00	2.89
Netherlands	1936	0.99	2.04	3.03
Spain	1935	2.00	1.40	3.40
Egypt (*c*)	1943	0.59	2.89	3.48
Hungary	1939	2.11	1.72	3.83
Eire	1938	0.81	3.30	4.11
Greece	1936	2.20	2.00	4.20
Portugal	1939	1.95	2.33	4.28
Germany	1935	1.99	2.86	4.85
Czechoslovakia	1936	2.88	2.03	4.91

(*a*) Excluding full-blood aboriginals. (*b*) Excluding Maoris. (*c*) Localities having Health Bureaux.

A tabulation of puerperal causes for Australia according to age at death for married and single women separately will also be found in *Demography Bulletin*, No. 64.

The total number of children left by the 303 married mothers who died from puerperal causes in 1946 was 658, an average of 2.2 children per mother.

Thirteen of the mothers who died had been married less than one year, 38 between one and two years, and 28 between two and three years. The duration of marriage ranged up to 28 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography Bulletin*, No. 64, which also includes a table showing in combination the duration of marriage and previous issue.

(vii) *Congenital Malformation, Debility, Premature Birth, etc.* (75 to 79). The deaths under this heading in 1946 numbered 3,881 of which 3,753 were of children under one year of age. Of all deaths of children under one year of age 73 per cent. were due to these causes. The number of deaths for 1946 is given in the following table. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

DEATHS FROM CONGENITAL MALFORMATION, DEBILITY, ETC., 1946.

State or Territory.	Congenital Malformation.			Premature Birth and Injury at Birth.			Congenital Debility and other Diseases peculiar to the First Year of Life.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	190	163	353	550	374	924	166	99	265
Victoria ..	106	99	205	300	252	552	93	89	182
Queensland ..	61	62	123	234	172	406	61	42	103
South Australia ..	35	25	60	107	87	194	32	31	63
Western Australia	30	38	68	97	73	170	23	15	38
Tasmania ..	14	11	25	64	46	110	20	8	28
Northern Territory	1	..	1	2	1	3	..	..	..
Australian Capital Territory ..	1	..	1	3	3	6	1	..	1
Australia ..	438	398	836	1,357	1,008	2,365	396	284	680
Number of deaths under one year	379	329	708	1,357	1,008	2,365	396	284	680
Number of deaths under one year per 1,000 births	4.21	3.87	4.02	15.08	11.87	13.41	4.40	3.33	3.85

(viii) *Suicide* (81).—(*a*) *General.* Deaths from suicide in 1946 numbered 732, compared with an annual average of 624 during 1911–15, 621 during 1921–25, 798 during 1931–35 and 568 during 1941–45.

(*b*) *Modes Adopted.* The modes adopted by persons who committed suicide in 1945 and 1946 were as follows :—

SUICIDE : MODES ADOPTED, AUSTRALIA.

Mode of Death.	Males.		Females.		Persons.	
	1945.	1946.	1945.	1946.	1945.	1946.
Poisoning	69	90	60	70	129	160
Poisonous gas	37	42	23	42	60	84
Hanging or strangulation	71	86	20	28	91	114
Drowning	23	47	35	36	58	83
Firearms and explosives	112	160	12	14	124	174
Cutting or piercing instruments ..	52	59	9	11	61	70
Jumping from high places ..	14	11	5	8	19	19
Crushing	2	1	1	..	3	1
Other modes	14	17	8	10	22	27
Total	394	513	173	219	567	732

(*c*) *Death-rates.* The death-rates from suicide and the proportion per 10,000 of total deaths are given in the following table for each year 1942 to 1946, corresponding rates for the periods 1911–15, 1921–25, 1931–35 and 1941–45, being shown at the foot of the table :—

SUICIDE : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	Number of Deaths.			Death-rates.(*a*)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	190	89	279	13	6	10	119	71	98
Victoria ..	128	57	185	13	6	9	113	55	86
Queensland ..	96	31	127	17	6	12	155	70	119
South Australia ..	39	19	58	13	6	9	112	64	90
Western Australia	46	12	58	18	5	12	165	61	122
Tasmania ..	12	11	23	10	9	9	86	95	90
Northern Territory	2	..	2	50	..	38	435	..	364
Australian Capital Territory ..	..	..	..	..	..	..	..	..	..
Australia 1946 ..	513	219	732	14	6	10	124	66	98
,, 1945 ..	394	173	567	11	5	8	103	54	81
,, 1944 ..	362	178	540	10	5	7	96	56	78
,, 1943 ..	376	140	516	10	4	7	92	42	69
,, 1942 ..	432	162	594	12	5	8	104	48	79
Annual Average—									
1941–45 ..	405	163	568	11	5	8	102	50	79
1931–35 ..	635	163	798	19	5	12	190	62	134
1921–25 ..	509	112	621	18	4	11	166	48	114
1911–15 ..	509	115	624	21	5	13	172	53	122

(*a*) Number of deaths from suicide per 100,000 of mean population.

(*d*) *Age at Death.* From the following table which shows the age of persons who committed suicide in 1945 and 1946 it will be seen that both young and extremely old people took their lives during these years.

AGE OF PERSONS WHO COMMITTED SUICIDE : AUSTRALIA.

Group-age (Years).	1945.			1946.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
10–14	2	..	2	3	..	3
15–19	10	5	15	12	1	13
20–24	23	5	28	19	8	27
25–29	15	12	27	29	9	38
30–34	26	19	45	43	18	61
35–39	24	15	39	32	15	47
40–44	34	11	45	42	26	68
45–49	52	23	75	44	27	71
50–54	37	22	59	56	23	79
55–59	43	21	64	67	29	96
60–64	39	22	61	50	20	70
65–69	29	10	39	46	13	59
70–74	25	3	28	32	10	42
75–79	19	3	22	26	10	36
80–84	14	1	15	9	5	14
85–89	2	1	3	2	4	6
90 and over ..	..	..	..	1	1	2
Total Deaths ..	394	173	567	513	219	732

(*e*) *Occupation at Death, Males.* A table showing main groups of occupations of males who committed suicide during 1946 appears in *Demography Bulletin*, No. 64.

(*f*) *Death-rates, Various Countries.* The following table shows the death-rate from suicide for Australia and each State in comparison with the rates for various other countries. Figures for years later than 1939 are not given as they are based on population estimates whose comparability is open to doubt because of the abnormal distribution of population during war-time. The table indicates that Australia occupies a fairly favourable position as regards the death-rate from suicide.

SUICIDE : DEATH-RATES (*a*), VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Egypt	1936	2.0	New Zealand (*d*) ..	1939	11.7
Eire	1939	2.7	Portugal	1939	12.9
Spain	1935	3.9	U.S. of America ..	1939	14.2
Greece	1936	5.7	Japan	1936	15.1
Norway	1937	6.9	Sweden	1937	15.6
Italy	1938	7.2	Finland	1936	16.2
Netherlands ..	1936	8.1	Belgium	1935	16.8
Canada	1939	8.7	Denmark	1935	19.4
Australia (*b*) ..	**1939**	**11.2**	France	1934	21.4
Victoria (*b*) ..	1939	7.7	Poland (*e*)	1936	22.0
Tasmania (*b*) ..	1939	8.4	Switzerland ..	1939	23.8
South Australia (*b*) ..	1939	10.9	Hungary	1939	26.0
New South Wales (*b*)	1939	12.0	Germany	1935	27.5
Queensland (*b*) ..	1939	14.4	Czechoslovakia ..	1936	27.8
Western Australia (*b*)	1939	15.3			
Union of South Africa (*c*)	1939	11.3			
Great Britain and Northern Ireland ..	1939	11.6			
Northern Ireland	1939	5.2			
Scotland ..	1939	9.0			
England and Wales	1939	12.2			

(*a*) Number of deaths per 100,000 of mean population. (*b*) Excluding full-blood aboriginals. (*c*) European population only. (*d*) Excluding Maoris. (*e*) In towns with over 100,000 inhabitants.

(ix) *Homicide* (82). Deaths from homicide in 1946 numbered 90, which was 23 more than the previous year and 7 more than the average for the five years 1941 to 1945, namely, 83. See par. (xvi).

(x) *Accidental or Violent Deaths (including Suicide and Homicide).* The following table shows the various kinds of violent deaths, including suicides and homicides, recorded in Australia for 1946. Corresponding figures for 1945 may be obtained from *Demography Bulletin*, No. 63.

DEATHS FROM EXTERNAL VIOLENCE : AUSTRALIA, 1946.

Cause of Death.	Males.	Females.	Persons
Suicide (see par. (viii))	513	219	732
Infanticide (murder of infants under 1 year)	2	5	7
Homicide by firearms	18	10	28
Homicide by cutting or piercing instruments	11	9	20
Homicide by other or unspecified means	22	13	35
Total Homicide	53	37	90
Accidents on railways	164	20	184
Automobile accidents—			
Collisions with trains	13	1	14
Collisions with trams	12	5	17
Other automobile accidents	836	207	1,043
Motor cycle accidents (*a*)	114	18	132
Other road transport accidents—			
Tramway accidents (on roads)	52	14	66
Other road transport accidents	60	10	70
Water transport accidents	11	..	11
Air transport accidents	19	13	32
Accidents in mines and quarries	43	..	43
Agricultural and forestry accidents—			
Accidents from farm machinery and vehicles	35	..	35
Injury by animals	16	1	17
Other agricultural and forestry accidents	39	..	39
Accidents caused by machinery (n.e.i.)	35	1	36
Food poisoning	3	2	5
Accidental absorption of poisonous gases	17	5	22
Other acute accidental poisoning (not by gas)	24	21	45
Conflagration	15	5	20
Accidental burns (conflagration excepted)	70	73	143
Accidental mechanical suffocation	44	22	66
Accidental drowning	291	73	364
Accidental injury by firearms	66	7	73
Accidental injury by cutting or piercing instruments	11	1	12
Accidental injury by fall, crushing, landslide, etc.—			
Fall, not otherwise specified	437	485	922
Other crushings	22	2	24
Injuries by animals (n.e.i.)	7	2	9
Hunger or thirst	2	..	2
Excessive cold	2	..	2
Excessive heat	30	22	52
Lightning	1	..	1
Electricity (lightning excepted)	41	4	45
Attack by venomous animals—			
Snakebite	4	1	5
Other	1	..	1
Other accidents—			
Vaccinia and other sequelæ of vaccination	..	1	1
Other accidents due to medical or surgical intervention	14	15	29
Lack of care of the new-born	6	3	9
Other and unspecified accidents	172	49	221
Legal executions	2	..	2
External Violence, excluding Suicide and Homicide	2,731	1,083	3,814
Total Deaths from External Violence	3,297	1,339	4,636

(*a*) Other than collisions with trains, trams or motor-cars.

The following table of death-rates per million of mean population reveals a decrease in 1921–25 for External Violence, excluding Suicide and Homicide, but an increase in the rates for 1926–30 to which the growth of automobile accidents contributed very largely. A decreased death-rate was recorded during 1931–35, but the rate rose again during 1936–40. The sharp decline during 1941–45 may be attributed to the decrease in number of automobile accidents which resulted from the war-time restrictions of travel.

DEATH-RATES, ETC., EXTERNAL VIOLENCE : AUSTRALIA.

Period.	Death-rates(*a*) from Homicide.			Death-rates(*a*) from External Violence, excluding Suicide and Homicide.			Death-rates(*a*) from all External Violence.			All External Violence Proportion per 10,000 Deaths.
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Persons.
1911–15 ..	21	16	19	948	268	621	1,170	330	770	718
1921–25 ..	17	13	15	753	211	487	950	260	610	643
1926–30 ..	19	15	17	843	240	549	1,070	300	690	746
1931–35 ..	21	11	16	714	223	472	923	284	609	676
1936–40 ..	18	9	13	862	283	576	1.069	342	699	725
1941–45 ..	14	9	11	670	261	466	795	315	557	558
1941 ..	8	9	8	782	262	525	919	317	621	619
1942 ..	17	10	13	735	269	504	872	324	600	572
1943 ..	14	7	10	647	260	454	764	306	536	520
1944 ..	17	12	15	613	258	436	729	319	525	551
1945 ..	14	7	11	571	255	413	692	309	501	526
1946 ..	14	10	12	728	289	510	881	359	621	621

(*a*) Number of deaths per 1,000,000 of mean population.

(xi) "*Other Diseases*". The intermediate and the abridged classifications of causes of death used in Tables A to E in the preceding pages differ from those used in issues of the Official Year Book previous to No. 25 in that no residue of "other diseases" is shown at the foot. The items are ranged in classes or groups of classes and each class or group of classes is made complete by the addition of an "other diseases" item for that class or group of classes. These "other diseases" items of the intermediate classification are expanded into their constituent causes in the following table :—

F.—DEATHS FROM "OTHER DISEASES" : AUSTRALIA, 1946.

Causes.	General Classification Number.	Males.	Females	Persons.
17. Other Infective and Parasitic Diseases.				
Cerebro-spinal meningococcal meningitis	6	42	32	74
Malignant pustule and anthrax	7	1	..	1
Erysipelas	11	3	3	6
Tetanus	12	55	16	71
Leprosy	23	2	2	4
Gonococcal infections	25	2	..	2
Relapsing fever	31	1	..	1
Other diseases due to spirochætes	32	12	10	22
Acute poliomyelitis and polioencephalitis	36	62	37	99
Acute lethargic encephalitis	37*a*	1	..	1
Sequelæ of encephalitis lethargica	37*b*	5	4	9
Unspecified encephalitis lethargica	37*c*	6	7	13
Herpes zoster	38*c*	1	4	5
German measles	38*d*	3	..	3
Chicken pox	38*e*	3	1	4
Other diseases due to viruses	38*f*	..	..	..
Mycoses	43	7	2	9
Venereal diseases other than syphilis and gonorrhœa ..	44*a*	1	1	2
Pernicious lymphogranulomatosis	44*b*	52	32	84
Mumps	44*c*	4	11	15
Other infective and parasitic diseases	44*d*	..	..	..
Total	..	263	102	425

F.—DEATHS FROM "OTHER DISEASES": AUSTRALIA, 1946—*continued.*

Causes.	General Classification Number.	Males.	Females	Persons.
29. Other General Diseases.				
Diseases of the pituitary gland	62	8	8	16
Diseases of the thymus (including status lymphaticus) ..	64	10	11	21
Diseases of the adrenal glands	65	15	19	34
Osteomalacia	66*a*	..	2	2
"Pink" disease	66*b*	11	4	15
Other general diseases	66*c*	10	12	22
Total	..	54	56	110
34. Other Chronic Poisoning.				
Lead poisoning—				
(*a*) Specified as occupational	78*a*	2	..	2
(*b*) Not specified as occupational	78*b*	3	2	5
Chronic poisoning by other substances—				
(*a*) Occupational poisoning	79*a*	..	..	..
(*b*) Other poisoning	79*b*	5	1	6
Total	..	10	3	13
40. Other Diseases of the Nervous System.				
Encephalitis (non-epidemic)—				
Intra-cranial abscess	80*a*	12	13	25
Other forms	80*b*	26	31	57
Convulsions in children under five years of age ..	86	15	10	25
Other diseases of the nervous system—				
Chorea	87*a*	2	2	4
Neuritis	87*b*	5	..	5
Paralysis agitans	87*c*	105	82	187
Disseminate sclerosis	87*d*	49	33	82
Others	87*e*	32	26	58
Total	..	246	197	443
48. Other Diseases of the Circulatory System.				
Aneurysm (other than heart and aorta)	96	54	49	103
Other diseases of the arteries	99	51	38	89
Varices	100*a*	1	6	7
Other diseases of the veins	100*b*	9	15	24
Diseases of the lymphatic system (lymphangitis, etc.) ..	101	3	4	7
High blood pressure (idiopathic)	102	129	143	272
Other diseases of the circulatory system	103	6	2	8
Total	..	253	257	510

F.—DEATHS FROM "OTHER DISEASES": AUSTRALIA, 1946—*continued.*

Causes.	General Classification Number.	Males.	Females	Persons.
52. Other Diseases of the Respiratory System (except Tuberculosis).				
Diseases of the nasal fossæ and annexa	104	8	8	16
Diseases of the larynx	105	18	15	33
Congestion, œdema, embolism, hæmorrhagic infarction and thrombosis of the lungs	111	216	272	488
Asthma	112	80	69	149
Pulmonary emphysema	113	19	2	21
Other diseases of the respiratory system (except tuberculosis)—				
Silicosis and other occupational respiratory diseases	114*a*	69	1	70
Gangrene of the lung	114*b*	8	2	10
Abscess of the lung	114*c*	20	6	26
Chronic interstitial pneumonia other than occupational	114*d*	20	3	23
Other diseases of the respiratory system not specified as occupational	114*e*	29	14	43
Total	..	487	392	879
60. Other Diseases of the Digestive System.				
Diseases of the buccal cavity and annexa, etc.—				
Diseases of pharynx and tonsils	115*a*	34	22	56
Other diseases	115*b*	9	4	13
Diseases of the œsophagus	116	9	10	19
Other diseases of the stomach (cancer excepted) ..	118	32	21	53
Other diseases of the intestines	123	50	48	98
Diseases of the pancreas	128	37	35	72
Peritonitis without stated cause	129	34	25	59
Total	..	205	165	370
72. Other Accidents and Diseases of Child-Birth and the Puerperium.				
Hæmorrhage of child-birth and the puerperium ..	146	..	41	41
Puerperal toxæmias—				
Puerperal eclampsia	148*a*	..	22	22
Puerperal albuminuria and nephritis	148*b*	..	9	9
Acute yellow atrophy of the liver (post-partum) ..	148*c*	..	3	3
Other puerperal toxæmias	148*d*	..	11	11
Laceration, rupture or other trauma of pelvic organs and tissue	149*a*	..	5	5
Other accidents of child-birth	149*b*	..	24	24
Other or unspecified diseases of child-birth and the puerperium—				
Puerperal diseases of the breast	150*a*	..	..	..
Other diseases	150*b*	..	10	10
Total	..	..	125	125

17. **Causes of Deaths in Classes.**—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under eighteen general headings adopted by the compilers of the International Nomenclature is, however, shown in the

following table for 1946, together with the death-rates and proportions of total deaths pertaining to those classes. A further table furnishes the death-rates for the five-year periods 1921–25, 1931–35 and 1941–45. Figures for 1945 corresponding to the first table may be obtained from *Demography Bulletin*, No. 63.

DEATHS, DEATH-RATES, ETC., IN CLASSES : AUSTRALIA, 1946.

Class.	Total Deaths.			Death-rates.(*a*)			Proportion per 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Infective and Parasitic Diseases	2,437	1,398	3,835	65	37	51	590	419	514
2. Cancer and Other Tumours ..	4,793	4,782	9,575	128	128	128	1,161	1,433	1,282
3. Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin-deficiency Diseases	691	1,307	1,998	19	35	27	167	392	268
4. Diseases of the Blood and Blood-forming Organs	265	332	597	7	9	8	64	99	80
5. Chronic Poisoning and Intoxication	101	21	122	3	1	2	25	6	16
6. Diseases of the Nervous System and Sense Organs	3,843	4,683	8,526	103	126	114	931	1,403	1,142
7. Diseases of the Circulatory System	14,722	10,395	25,117	393	279	337	3,566	3,114	3,364
8. Diseases of the Respiratory System	3,006	2,396	5,402	80	64	72	728	718	723
9. Diseases of the Digestive System	1,741	1,314	3,055	46	35	41	422	394	409
10. Diseases of the Genito-urinary System	2,763	1,888	4,651	74	51	62	669	566	623
11. Diseases of Pregnancy, Childbirth and Puerperal State ..	..	327	327	..	9	5	..	98	44
12. Diseases of the Skin and Cellular Tissue	42	42	84	1	1	1	10	13	11
13. Diseases of the Bones and Organs of Movement	38	31	69	1	1	1	9	9	9
14. Congenital Malformations ..	438	398	836	12	11	11	106	119	112
15. Diseases Peculiar to the First Year of Life	1,753	1,292	3,045	47	35	41	425	387	408
16. Senility, Old-age	1,203	1,355	2,558	32	36	34	292	406	343
17. Violent or Accidental Deaths ..	3,297	1,339	4,636	88	36	62	799	401	621
18. Ill-defined Causes of Death ..	150	78	228	4	2	3	36	23	31
Total	41,283	33,378	74,661	1,103	896	1,000	10,000	10,000	10,000

(*a*) Number of deaths per 100,000 of mean population.

DEATH-RATES(*a*) IN CLASSES : AUSTRALIA.

Class.	1921–25.			1931–35.			1941–45.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Infective and Parasitic Diseases	248	222	236	92	70	81	77	48	63
2. Cancer and Other Tumours ..				113	108	110	123	128	126
3. Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin-deficiency Diseases				18	33	25	19	37	28
4. Diseases of the Blood and Blood-forming Organs				9	9	9	7	8	8
5. Chronic Poisoning and Intoxication				2	..	1	2	1	1
6. Diseases of the Nervous System and Sense Organs	93	83	88	66	67	67	98	122	110
7. Diseases of the Circulatory System	150	118	134	249	200	225	351	269	312
8. Diseases of the Respiratory System	121	88	105	101	75	88	89	68	78
9. Diseases of the Digestive System	97	81	89	60	46	53	55	40	47
10. Diseases of the Genito-urinary System	72	49	60	81	59	70	81	55	68
11. Diseases of Pregnancy, Childbirth and Puerperal State ..	..	25	12	..	19	9	..	13	6
12. Diseases of the Skin and Cellular Tissue	6	4	5	3	3	3	2	2	2
13. Diseases of the Bones and Organs of Movement	3	2	2	3	1	2	2	1	1
14. Congenital Malformations ..	12	10	11	11	8	10	11	10	11
15. Diseases Peculiar to the First Year of Life	73	56	65	44	34	39	46	34	40
16. Senility, Old-age	76	68	72	42	42	42	38	36	37
17. Violent or Accidental Deaths ..	95	26	61	92	28	61	79	31	56
18. Ill-defined Causes of Death ..	15	9	12	7	2	5	5	2	3
Total	1,061	841	952	993	804	900	1,088	905	997

(*a*) Number of deaths per 100,000 of mean population.

18. **Age at Death of Married Males and Females, and Issue.**—*Demography Bulletin*, No. 64, contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married persons who died in Australia in 1946. Deaths of married males in 1946 numbered 28,937, and of married females, 25,193. The tabulations which follow deal, however, with only 28,530 males and 24,989 females, the information regarding issue in the remaining 615 cases being incomplete. The total number of children in the families of the 28,530 males was 104,566, and of the 24,989 females, 98,911. The average number of children is shown for various age-groups in the following table :—

AGE AT DEATH, AND AVERAGE ISSUE OF MARRIED MALES AND FEMALES : AUSTRALIA.

Age-group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1946.	1911.	1921.	1931.	1941.	1946.
Under 20 ..	0.33	..	0.75	..	1.00	0.94	0.77	0.66	0.79	0.44
20–24 ..	0.77	0.84	0.81	0.73	0.68	1.27	1.22	1.13	0.95	0.83
25–29 ..	1.25	1.29	1.33	1.12	1.23	1.82	1.86	1.81	1.45	1.43
30–34 ..	2.05	2.06	1.79	1.76	1.76	2.74	2.45	2.34	1.91	1.91
35–39 ..	2.80	2.58	2.13	2.11	2.08	3.64	3.29	2.89	2.30	2.13
40–44 ..	3.47	3.23	2.77	2.49	2.39	4.09	3.66	3.29	2.77	2.57
45–49 ..	4.09	3.48	3.10	2.68	2.49	4.54	3.76	3.55	2.93	2.77
50–54 ..	4.75	3.76	3.46	2.96	2.70	5.35	4.23	3.60	3.29	3.04
55–59 ..	5.44	4.41	3.69	3.28	3.10	5.86	4.69	4.01	3.55	3.30
60–64 ..	5.95	4.98	4.02	3.55	3.24	5.99	5.39	4.21	3.79	3.64
65–69 ..	6.23	5.50	4.41	3.73	3.55	6.50	5.86	4.82	4.01	3.75
70–74 ..	6.41	6.06	5.06	4.17	3.85	6.38	6.30	5.41	4.29	4.00
75–79 ..	6.75	6.66	5.65	4.56	4.17	6.72	6.56	6.02	4.85	4.34
80–84 ..	6.68	6.89	6.17	4.93	4.61	6.22	6.76	6.26	5.39	4.76
85–89 ..	6.67	7.18	6.59	5.70	5.17	5.97	6.93	6.57	5.85	5.48
90–94 ..	6.03	7.21	6.94	6.57	5.77	5.69	6.53	6.73	6.11	5.70
95–99 ..	7.30	6.97	6.69	7.04	5.92	5.05	6.05	7.10	6.34	5.94
100 and over	9.33	9.20	7.00	8.69	5.33	5.17	5.11	8.20	6.73	5.21
Age not stated	4.33	5.36	5.00	..	..	4.60	5.80	5.00	..	..
All Ages ..	5.42	4.97	4.44	3.91	3.67	5.35	5.05	4.72	4.22	3.96

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about 1,000 to 216. The totals are shown in the following table :—

ISSUE OF DECEASED MARRIED MALES AND FEMALES : AUSTRALIA, 1946.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	44,429	44,031	88,460	Living ..	39,353	39,970	79,323
Dead ..	9,406	6,700	16,106	Dead ..	11,280	8,808	19,588
Total ..	53,835	50,731	104,566	Total ..	50,633	48,278	98,911

19. **Age at Marriage of Deceased Males and Females, and Issue.**—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table which gives the average

issue of males and females according to the age at marriage of the deceased parent shows a corresponding decrease in the averages as the age at marriage advances :—

AGE AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE : AUSTRALIA.

Age-group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1946.	1911.	1921.	1931.	1941.	1946.
Under 15 ..	..	..	..	..	..	9.71	7.60	6.36	7.80	5.50
15–19 ..	6.97	6.32	6.15	5.40	5.20	7.10	6.97	6.79	6.10	5.88
20–24 ..	6.34	6.05	5.56	4.89	4.65	5.77	5.50	5.23	4.80	4.53
25–29 ..	5.70	5.17	4.70	4.21	3.87	4.27	4.09	3.79	3.51	3.30
30–34 ..	4.92	4.45	3.96	3.41	3.22	3.04	2.66	2.42	2.35	2.25
35–39 ..	4.05	3.90	3.14	2.80	2.66	1.68	1.61	1.40	1.26	1.22
40–44 ..	3.43	2.67	2.36	2.01	1.96	0.72	0.62	0.39	0.35	0.49
45–49 ..	2.59	2.20	1.96	1.52	1.50	0.26	0.03	0.12	0.01	0.17
50–54 ..	2.45	1.70	1.60	1.05	1.16	..	..	..	..	..
55–59 ..	1.66	1.30	0.95	0.79	0.75	..	..	..	..	..
60–64 ..	2.00	0.33	0.63	0.29	0.66	..	..	..	..	..
65 and over ..	1.00	0.25	0.18	0.01	0.90	..	..	..	..	..
Age unspecified	5.40	4.93	3.64	2.95	2.76	5.23	5.41	3.96	2.45	2.59
All Ages ..	5.42	4.97	4.44	3.91	3.67	5.35	5.05	4.72	4.22	3.96

20. **Birthplace of Deceased Married Males and Females, and Issue.**—A table showing the birthplaces of married males and females who died in 1911 and 1940, together with the average issue, may be found in the Official Year Book, No. 34, p. 366.

21. **Occupation of Deceased Married Males and Issue.**—A summary of the main groups of occupations of married males who died during 1946 appears in *Demography Bulletin*, No. 64.

§ 4. Registration of Births, Deaths and Marriages in the Australian Capital Territory.

To the end of 1929 the provisions of the Registration of Births, Deaths and Marriages Act of 1899 and the Marriage Act of 1899 of New South Wales applied to the Australian Capital Territory. Births, deaths and marriages occurring within the Territory were registered by the District Registrars at Queanbeyan and Nowra, and were incorporated in the New South Wales records.

In 1929, however, the Registration of Births, Deaths and Marriages Ordinances were enacted, providing for the assumption by the Commonwealth Government of the function of registration within the Territory as from 1st January, 1930. All registrations are made at the Registrar's Office, Civic Centre, Canberra.

Marriages within the Territory are celebrated according to the conditions prescribed by the Marriage Ordinance 1929–1938. This Ordinance, which closely follows the provisions of the Marriage Act of New South Wales, which it supersedes as regards the Australian Capital Territory, came into operation on 1st January, 1930.

CHAPTER XVIII.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. **Place of Mining in Australian Development.**—The value of production from the mineral industry is now considerably less than that returned by the agricultural, the pastoral or the dairying industry ; nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia in large numbers and thus accelerated its national development.

2. **Extent of Mineral Wealth.**—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. More detailed reference to this matter will be found in preceding issues of the Official Year Book. (See No. 22, p. 755.)

During the years 1934 to 1940 a survey of certain areas in Australia north of the 22nd parallel of south latitude was undertaken by the Governments of the Commonwealth, Queensland and Western Australia. This survey is referred to in § 16 below.

3. **Quantity and Value of Production in 1945.**—The quantities (where available) and the values of certain of the principal minerals produced in each State, and in Australia as a whole, during 1945, are shown in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the State Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of *metals*, this matter being dealt with separately in § 17 below. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns. The iron and steel produced therefrom cannot be assigned to the mineral industry of New South Wales, but the value of the transformation from ore to metal is credited to the manufacturing industry of that State. Similarly, lead, silver-lead, cadmium, cobalt and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out principally in South Australia and Tasmania.

The quantities of cadmium and cobalt recovered in Tasmania from zinc ores mined in New South Wales during 1945 are shown in § 8, par. 2 (page 831.)

MINERAL PRODUCTION : QUANTITIES, 1945.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	Australia.
Antimony and Ore	ton	152	24	25	..	..	..	..	201
Arsenic and Ore ..	,,	..	..	..	..	1,989	..	..	1,989
Asbestos ..	cwt.	52,640	..	..	140	21,840	5,520	..	80,140
Barytes ..	ton	977	..	..	2,470	..	..	..	3,447
Bismuth and Ore ..	cwt.	64	..	19	..	5	11	..	99
Cadmium ..	,,	(a)	..	..	..	..	(b) 580	..	(c) 580
Chalk, Talc, Soapstone, etc.	ton	495	..	..	2,989	..	153	..	3,637
Coal—									
Black	,,	10,237,886	247,297	1,634,746	41,452	543,363	149,077	..	12,853,821
Brown ..	,,	..	5,445,108	..	..	..	..	..	5,445,108
Copper (Ingot and Matte) ..	,,	3,050	..	15,007	134	40	7,473	146	25,850
Copper Ore ..	,,								
Diatomaceous earth	,,	2,230	829	29	..	..	..	..	3,088
Felspar	,,	3,725	214	..	940	1,235	..	..	6,114
Fireclay	,,	..	..	..	4,786	2,413	..	..	7,199
Graphite ..	cwt.	1,000	..	1,140	100	..	..	..	2,240
Gold	fine oz.	43,129	61,790	63,223	277	468,551	13,050	7,193	657,213
Gypsum ..	ton	22,772	11,569	..	65,600	7,233	..	..	107,174
Iron-stone and Ore	,,	94,247	..	1,715	1,519,594	..	..	..	1,615,556
Kaolin	,,	..	3,662	..	1,939	..	5,718	..	11,319
Lead	,,	(a)	..	..	4	..	6,298	..	(c) 6,302
Limestone Flux ..	,,	139,348	5,276	..	225,754	..	53,359	..	423,737
Magnesite ..	,,	22,342	..	..	740	..	..	..	23,082
Manganese Ore ..	ton	984	..	..	..	..	..	..	984
Mica	cwt.	120	..	..	(d) 1,880	..	..	1,107	3,107
Molybdenite ..	,,	28	..	..	..	..	..	..	28

(a See letterpress preceding this table. (b) Excludes 3,820 cwt. of cadmium valued at £85,510 and 280 cwt. of cobalt oxide valued at £6,291, from ores of N.S.W. origin. (c) Incomplete. (d) Damourite.

MINERAL PRODUCTION: QUANTITIES, 1945—*continued.*

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
Ochre and Other Pigment Clays	ton	1,012	..	..	..	650	66	554	2,282
Osmiridium ..	oz.	..	..	..	..	..	109	..	109
Phosphate ..	ton	..	..	..	714	8,483	..	..	9,197
Salt	,,	..	(b)	..	171,067	(b)	..	..	(c)171,067
Scheelite ..	cwt.	340	..	101	..	16	10,560	..	11,017
Shale (Oil) ..	ton	123,170	..	..	..	..	..	..	123,170
Silica	,,	68,907	..	..	13,276	175	7,939	..	90,297
Silver	oz.	(a)131,309	14,861	112,710	3,241	146,025	816,157	..	c1,224,303
Silver-lead Ore, Concentrates, etc.	ton	205,805	..	..	..	..	..	..	205,805
Tantalite and Concentrates ..	cwt.	..	..	2	..	..	..	8	10
Tin and Tin Ore ..	ton	776	42	930	..	22	801	23	2,594
Wolfram ..	cwt.	620	..	2,599	..	..	4,220	2,540	9,979
Zinc and Concentrates	ton	265,284	..	..	..	..	15,609	..	280,893
Zircon - Rutile - Ilmanite -Monazite Concentrates ..	ton	(b)	..	13,414	..	..	..	..	(c) 13,414

(*a*) See letterpress preceding this table. (*b*) Not available. (*c*) Incomplete.

The values of the minerals raised in each State in 1945 are shown in the following table :—

MINERAL PRODUCTION : VALUES, 1945.

Mineral.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	N.T.	Australia.
	£	£	£	£	£	£	£	£
Antimony and Ore	5,808	118	1,048	..	..	..	..	6,974
Arsenic and Ore ..	..	..	..	..	41,771	..	..	41,771
Asbestos ..	8,478	..	..	112	44,661	7,193	..	60,444
Barytes ..	1,651	..	..	7,970	..	..	..	9,621
Bismuth and Ore ..	2,362	..	383	..	152	373	..	3,270
Cadmium ..	(*b*)	..	..	..	..	13,161	..	(*c*) 13,161
Chalk, Talc, Soapstone, etc. ..	3,605	..	..	10,917	..	532	..	15,054
Coal—								
Black	8,694,168	494,690	1,759,311	14,508	572,896	125,719	..	11,661,292
Brown ..	..	641,069	..	..	..	..	..	641,069
Copper (Ingot and Matt) .. Copper Ore ..	305,000	..	1,500,662	11,674	364	463,294	3,811	2,284,805
Diatomaceous earth	2,195	2,911	79	..	..	..	..	5,185
Felspar	8,080	794	..	2,350	4,321	..	..	15,545
Fireclay	..	..	..	2,991	1,544	..	..	4,535
Gems	283	..	1,382	..	..	..	..	1,665
Gold	461,303	661,430	676,712	2,970	5,012,225	139,573	76,811	7,031,024
Graphite ..	287	..	684	350	..	..	..	1,321
Gypsum ..	12,915	5,153	..	49,200	9,136	..	..	76,404
Iron-stone and Ore	104,662	..	2,561	1,747,533	..	..	..	1,854,756
Kaolin	..	5,681	..	2,909	..	11,562	..	20,152
Lead	(*b*)	..	..	88	..	157,459	..	(*c*)157,547
Limestone Flux ..	57,314	3,676	..	84,657	..	28,417	..	174,064
Magnesite ..	26,721	..	..	1,438	..	..	..	28,159
Manganese Ore ..	6,977	..	..	..	..	..	..	6.977
Mica	52	..	..	(*d*) 256	..	..	44,955	45.263
Molybdenite ..	209	..	..	..	..	..	..	209
Ochre and Other Pigment Clays	1,571	..	..	..	3,086	191	2,079	6,927
Opal	3,000	..	..	12,284	..	..	..	15,284
Osmiridium ..	..	..	..	..	..	2,665	..	2,665
Phosphate ..	..	..	..	1,486	46,656	..	..	48,142
Salt	..	(*e*)	..	342,134	(*e*)	..	..	(*c*) 342,134
Scheelite ..	7,111	..	2,018	..	8,946	158,093	..	176,168
Shale (Oil) ..	164,648	..	..	..	..	..	..	164,648
Silica	17,932	..	..	8,083	227	6,025	..	32,267
Silver	(*b*) 20,703	1,622	17,788	513	22,757	102,101	..	(*c*) 165,484
Silver-lead Ore, Concentrates, etc.	4,604,962	..	..	..	..	..	..	4,604,962
Tantalite and Concentrates ..	..	..	60	..	..	..	578	638
Tin and Tin Ore ..	291,788	9,869	207,948	..	4,370	240,369	5,026	759,370
Wolfram ..	9,604	..	48,176	..	..	69.896	42,937	170,613
Zinc and Concentrates	1,073,340	..	..	..	..	407,307	...	1,480,647
Zircon - Rutile - Ilmanite-Monazite Concentrates ..	198,083	..	126,020	..	..	..	..	324,103
Unenumerated ..	17,803	3,361	10,295	5,568	31,126	136	..	68,289
Total ..	16,112,615	1,830,374	4,355,127	2,309,991	5,804,238	1,934,066	176,197	32,522,608

(*a*) For items excluded see letterpress below. (*b*) See letterpress preceding this table. (*c*) Incomplete. (*d*) Damourite. (*e*) Not available.

The figures in the foregoing table exclude certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement and slates, which might be included under the generic term "mineral". Particulars of the production of some of these items are given in par. 6, Quarries, below. Items excluded, such as cement, carbide and sulphuric acid, are included in manufacturing production, and, in any case, only the raw material could properly be included in mineral production. The items excluded from the total for New South Wales in 1945 consisted of—lime, £58,532; building stone, £36,409; Portland cement, £967,935; coke, £1,950,032; road material, and gravel, £701,472; shell grit, £22,486; sulphur and sulphuric acid, £363,115; and brick and pottery clays, £122,240. Carbide and cement, £273,588, have been excluded from the Tasmanian figures.

4. **Value of Production, 1938 to 1945.**—The values of the minerals produced in each State during the years 1938 and 1942 to 1945 are given in the table hereunder:—

MINERAL PRODUCTION: VALUES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£	£	£	£	£	£	£	£
1938 ..	10,731,391	1,884,015	3,966,119	2,932,473	10,844,469	1,889,804	214,724	32,462,995
1942 ..	16,690,283	1,980,972	5,023,495	3,012,973	9,487,562	2,494,119	204,366	38,893,770
1943 ..	16,477,501	1,593,994	4,214,525	3,070,716	6,383,755	2,378,533	130,795	34,249,819
1944 ..	16,496,085	1,602,105	4,477,087	2,926,666	5,667,497	2,220,136	126,025	33,515,601
1945 ..	16,112,615	1,830,374	4,355,127	2,309,991	5,804,238	1,934,066	176,197	32,522,608

The value of mineral production in Australia during 1941 was the highest ever recorded. Although fluctuations have occurred in some States, the values recorded for Australia have declined annually since that year.

Since 1941 the greatest decrease has occurred in Western Australia, £6,595,000; followed by Queensland, £946,000; South Australia, £877,000; Tasmania, £716,000; Victoria, £541,000; Northern Territory, £98,000. New South Wales increased by £1,039,000. There was a downward movement in quantity and value for many minerals. The value of gold decreased by almost £9 million, but black coal increased by £1.2 million. The decrease of all mineral production was £8,967,000.

5. **Total Production to end of 1945.**—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1945. The items excluded from the preceding table are also omitted here, and consequently the total for New South Wales is £69,500,000 less than that published by the State Department of Mines. The principal items excluded from the table below are coke, £32,900,000; cement, £33,000,000; lime, £2,400,000; and considerable values for marble, slate, granite, chert, gravels, etc., which the State Department now includes in the returns for quarries.

MINERAL PRODUCTION: VALUES TO END OF 1945.

Mineral.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Gold ..	72,570	317,525	99,072	2,147	276,030	11,051	3,575	781,970
Silver and lead ..	170,548	280	15,362	385	2,570	12,617	67	201,829
Copper ..	17,520	217	34,064	33,313	1,816	28,859	255	116,044
Iron ..	9,381	16	532	38,175	37	97	..	48,541
Tin ..	19,028	1,240	13,643	..	1,679	20,798	697	57,085
Wolfram	413	19	1,436	..	2	909	749	3,528
Zinc ..	30,888	..	3,427	16	5	6,041	..	40,377
Coal ..	286,679	23,572	36,669	28	12,367	3,214	..	362,529
Other ..	12,293	1,156	3,495	9,884	1,864	3,651	333	32,676
Total ..	619,323	344,025	207,700	84,248	296,370	87,237	5,676	1,644,579

The "other" minerals in New South Wales include alunite, £226,000; antimony, £435,000; arsenic, £212,000; bismuth, £257,000; chrome, £143,000; diamonds, £151,000; magnesite, £764,000; molybdenite, £232,000; opal, £1,639,000; scheelite, £243,000; and shale oil, £3,481,000. In the Victorian returns antimony ore was responsible for £636,000. The value for coal in this State includes £7,116,000 for brown coal. Included in "other" in the Queensland production were opal, £188,000; gems, £655,000; bismuth, £146,000; cobalt, £158,000; molybdenite, £628,000; limestone flux, £903,000; and arsenic, £124,000. The chief items in South Australian "other" minerals were salt, £6,134,000; limestone flux, £658,000; gypsum, £1,718,000; phosphate, £188,000; and opal, £236,000. In Western Australia arsenic, £679,000; gypsum, £149,000; and asbestos, £191,000 were the principal items included with "other" minerals. In the Tasmanian returns osmiridium was responsible for £657,000, scheelite for £553,000 and limestone flux for £1,349,000.

6. **Quarries.**—Statistics giving details of the output of quarries were first published in Official Year Book No. 33, 1940. The details were collected following a resolution of the Conference of Australian Statisticians held in 1935.

The Conference defined a quarry, for the purpose of these statistics, as one in which four hands or more are employed, or in which power other than hand-power is used. The details given in the following table represent the output of quarries conforming to this definition, although in a few relatively unimportant cases details of other establishments have been included.

The authorities responsible for the collection of these statistics are the Government Statistician in New South Wales, Victoria, Queensland and Western Australia, and the Department of Mines in South Australia and Tasmania.

It should be noted that the inclusion of returns from certain small establishments tends to inflate the figures in the following tables, but there is possibly a compensating factor in that some quantities used by shires and municipalities in the repair of roads have not been returned to the collecting authority. Complete details for all States for recent years are not available.

OUTPUT OF QUARRIES, 1945.

Description.	N.S.W.	Victoria. (*a*)	Q'land. (*a*) (*b*)	S. Aust.	W. Aust. (*a*)	Tas. (*d*)	Australia.
QUANTITY.							
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Building Stone ..	13,456	5,909	2,757	19,181	3,386	..	44,689
Macadam, Ballast etc.	3,286.549	886,663	420,294	906,287	159,195	..	5,658,988
Limestone (*c*) ..	(*d*)	297,168	42,760	6,572	26,244	..	(*e*) 372,744
Clays	528,526	28,554	..	112,985	(*d*)	..	(*e*) 670,065
Other	..	..	..	..	6,379	..	6,379
Total ..	*e*3,828,531	1,218,294	465,811	1,045,025	(*e*) 195,204	..	*e*6,752,865
VALUE.							
	£	£	£	£	£	£	£
Building Stone ..	36,409	15,625	1,626	13,961	4,081	..	71,702
Macadam, Ballast, etc.	701,472	409,742	127,710	221,969	77,783	..	1,538,676
Limestone (*c*) ..	(*d*)	85,803	24,449	821	6,428	..	(*e*) 117,501
Clays	122,240	6,184	..	14,123	27,568	..	170,115
Other	..	..	..	..	1,362	..	1,362
Total ..	(*e*) 860,121	517,354	153,785	250,874	(*e*) 117,222	..	*e*1,899,356

(*a*) Year ended June, 1946. (*b*) Estimated. (*c*) Limestone used as a flux and for the manufacture of lime and cement, omitting quantities used as building stone and as macadam, ballast, etc., which are already included under those headings. (*d*) Not available. (*e*) Incomplete.

In the following table corresponding details are given for each State for the years 1939 and 1942 to 1945 :—

OUTPUT OF QUARRIES.

State.	1939.		1942.		1943.		1944.		1945.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 tons.	£	'000 tons.	£	'000 tons.	£	'000 tons.	£	'000 tons.	£
N.S.W. ..	8,461	1,446,927	c 4,302	c 929,854	c 5,450	c1,152,814	c 3,412	c 767,511	c 3,829	c 860,121
Victoria(*a*)	1,812	552,888	1,189	432,235	1,083	405,237	1,090	421,050	1,218	517,354
Q'land(*a*)(*b*)	647	186,951	268	93,573	406	112,814	310	116,626	466	153,785
S. Aust. ..	2,063	469,606	1,216	311,973	908	230,422	862	216,796	1,045	250,874
W. Aust.(*a*)	(*c*) 466	214,075	(*d*)	(*d*)	(*c*) 195	c 106,873	(*c*) 175	c 105,075	(*c*) 195	c 117,222
Tasmania ..	331	98,063	(*d*)	(*d*)	(*d*)	(*d*)	(*d*)	(*d*)	(*d*)	(*d*)
Total ..	13,780	2,968,510	c 6,975	c1,767,635	c 8,042	c2,008,160	c 5,849	c1,627,058	c 6,753	c1,899,356

(*a*) Year ended June following. (*b*) Estimated. (*c*) Incomplete. (*d*) Not available.

§ 2. Gold.*

1. **Discovery in Various States.**—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event " precipitated Australia into nationhood ". A more or less detailed account of the finding of gold in the various States appears under this Section in Official Year Books, Nos. 1 to 4,

2. **Production at Various Periods.**—(i) *Quantities.* The following table shows the quantity of gold produced in the several States and in Australia as a whole during each of the nine decennial periods from 1851 to 1940, and in single years from 1941 to 1946. Owing to the defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development large quantities of gold were taken out of Australia by successful miners who preferred to keep the amount of their wealth secret.

GOLD : QUANTITY PRODUCED.
('000 fine ounces.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
1851–60 ..	2,715	21,973	3	..	..	186	..	24,877
1861–70 ..	3,220	15,327	489	..	..	3	..	19,039
1871–80 ..	2,019	9,564	2,527	136	..	165	19	14,430
1881–90 ..	1,014	6,689	3,259	58	42	357	168	11,487
1891–1900 ..	2,432	7,040	5,648	52	5,252	550	214	21,188
1901–10 ..	2,253	7,095	5,512	73	17,784	604	111	33,432
1911–20 ..	1,145	3,067	2,263	55	10,671	202	23	17,426
1921–30 ..	204	593	434	10	4,557	43	2	5,843
1931–40 ..	569	1,052	1,021	53	8,474	130	84	11,383
1941	88	150	109	2	1,109	20	19	1,497
1942	77	101	95	2	848	19	12	1,154
1943	64	56	63	1	546	17	4	751
1944	63	54	51	1	466	17	5	657
1945	43	62	63	..	469	13	7	657
1946	32	87	63	1	617	15	10	825
Total 1851–1946	15,938	72,910	21,600	444	50,835	2,341	678	164,746

The amount of gold raised in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows :—New South Wales, 1852 ; Victoria, 1856 ; Queensland, 1900 ; South Australia, 1904 ; and Tasmania, 1899.

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* **The values quoted in this section are in Australian currency throughout.**

Owing to the exhaustion of the more easily worked deposits and the unprofitableness of gold-mining during the era of high prices following the 1914–18 War, the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since the discovery of the precious metal.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development since that year received its impetus from the heavy depreciation of Australian currency in terms of gold. Oversea and local capital were attracted to the industry, and the employment of advanced geological methods and technical improvements brought many difficult or abandoned propositions into profit. The output of gold rose annually from 467,742 fine oz. in 1930 to 1,645,697 fine oz. in 1939. Following the outbreak of war in 1939, production fell very slightly in 1940, and rapidly thereafter, due to the diversion of man-power, until in 1944 it was only 656,867 fine oz. In 1945, the year in which hostilities in the 1939–45 War ceased, production showed practically no change but in 1946 a marked increase of 167,267 fine oz. or 25 per cent. was recorded, the total production for the year being 824,480 fine oz.

(ii) *Values.* In the next table the gold produced since 1851 is valued in Australian currency. For the years 1851 to 1918 and 1925 to 1930 the price used was £4 4s. $11^{5}/_{11}$d. per fine oz. For the years 1919 to 1924 the price ranged between £5 12s. 6d. in 1920 and £4 8s. 6d. in 1923. The value applied for 1931 and to June, 1932 was the export parity calculated directly from London prices. Since then the average price paid by the mints in Australia has been used.

GOLD : VALUE OF PRODUCTION.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£	£	£	£	£	£	£	£
1851–60..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861–70..	13.676,103	65,106,264	2,076,491	..	..	12,174	..	80,871,035
1871–80..	8,576,654	40,625 188	10,733,048	579,068	..	700,048	79,022	61,293,028
1881–90..	4,306,541	28,413,792	13,843,081	246,668	178,473	1,514,921	713,345	49,216,821
1891–1900	10,332,120	29,904,152	23,989,359	219,931	22,308,524	2,338,336	906,988	89,999,410
1901–10..	9,569,492	30,136,686	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911–20..	4.988,377	13,354,217	9,876,677	238,808	46,808,351	873,302	*a* 100,652	76,240,384
1921–30..	940,946	2,721,309	1,976,715	47,564	20,462,957	193,833	(*b*) 11,545	26,354,869
1931–40..	5,115,397	9,444,570	9,118,903	459,330	74,391,204	1,164,492	786,790	100,480,686
1941 ..	941,244	1,600,016	1,164,621	17,908	11,852,452	212,710	201,599	15,990,550
1942 ..	807,436	1,060,910	994,214	13,930	8,865,806	191,835	126,035	12,060,166
1943 ..	666,491	590,541	656,657	5,423	5,710,663	180,209	40,880	7,850,864
1944 ..	657,163	568,305	538,176	5,662	4,899,384	174,888	57,803	6,901,381
1945 ..	461,303	661,430	676,712	2,970	5,012,225	139,573	76,811	7,031,024
1946 ..	344,497	936,262	675,164	6.760	6,640,075	165,334	105,376	8,873,468
Total 1851–1946	72,914,347	318,460,694	99,746,781	2,154,102	282,670,529	11,216,389	3,680,717	790,843,559

(*a*) Period July, 1911 to June, 1920. (*b*) Period July, 1920 to December, 1930.

Values per fine oz. in Australian currency assigned to the production of gold during recent years are: £9 14s. $5\frac{3}{4}$d. in 1939, £10 13s. $1\frac{2}{3}$d. in 1940, £10 13s. 8d. in 1941, £10 9s. $0\frac{2}{3}$d. in 1942, £10 9s. 0d. in 1943, £10 10s. $1\frac{1}{2}$d. in 1944, £10 13s. $11\frac{1}{2}$d. in 1945 and £10 15s. 3d. in 1946. Further information regarding the price of gold is given in Chapter XIV. " Private Finance ".

3. **Changes in Relative Positions of States as Gold Producers.**—The figures in the table showing the value of gold raised explain the enormous increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of 1889, when its output was exceeded by

that of Queensland, Victoria maintained its position as the chief gold producer for a period of forty-seven years, until its production was surpassed by that of Western Australia in 1898. From that year onward the proportion contributed by Western Australia has increased and in 1946 represented 75 per cent. of the entire yield of Australia. The proportion contributed by this State for the period 1851 to 1946 was 31 per cent. and by Victoria for the same period 44 per cent.

4. **Place of Australia in the World's Gold Production.**—The table below shows, in decennial periods from 1851 to 1940, the world's gold production (as ascertained from authoritative sources) and the share of Australia therein. The details of world production shown for the years 1941 to 1945 are possibly less complete than those shown for previous years because of censorship during the war. The figures recorded for these years represent recorded production only and therefore omit any production for those countries not reporting. Included in this latter group are the Soviet Union, Japan and some other producing countries of lesser importance.

GOLD: WORLD PRODUCTION.

Period.	World Production of Gold.	Gold Produced in Australia.	Percentage of Australia on Total.
	Fine oz.	Fine oz.	%
1851–60	64,482,933	24,877,012	38.58
1861–70	61,098,343	19,038,661	31.16
1871–80	55,670,618	14,429,601	25.92
1881–90	51,280,184	11,586,625	22.59
1891–1900	101,647,521	21,187,662	20.84
1901–10	182,891,525	33,432,069	18.28
1911–20	206,511,263	17,426,466	8.44
1921–30	183,805,900	5,843,052	3.18
1931–40	315,508,597	11,383,487	3.61
1941	(*a*) 33,685,199	1,496,698	4.44
1942	(*a*) 29,858,342	1,153,787	3.86
1943	(*a*) 23,531,415	751,279	3.19
1944	(*a*) 20,903,289	656,867	3.14
1945	(*a*) 20,205,964	657,213	3.25

(*a*) Recorded production only. (See letterpress above.)

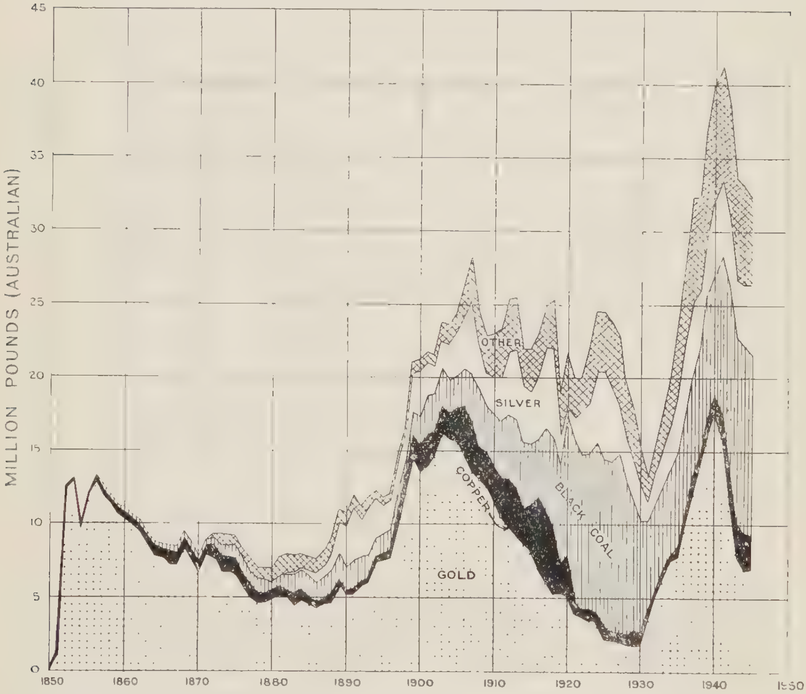
The quantities of gold produced in the principal producing countries in each of the years 1938 and 1942 to 1945 are shown in the table hereunder. Particulars of the quantities and values of gold produced in all countries for the ten years 1930–39 will be found in *Production Bulletin* No. 34, Part II., issued by this Bureau.

GOLD: PRODUCTION IN PRINCIPAL COUNTRIES.

Country.	1938.	1942.	1943.	1944.	1945.
	Fine oz.	Fine oz.	Fine oz.	Fine oz.	Fine oz.
Union of South Africa	12,161,392	14,126,852	12,804,379	12,279,629	12,224,629
Canada	4,715,480	4,841,306	3,649,671	2,922,911	2,696,727
U.S.S.R. (Russia) ..	5,235,909	(*a*)	(*a*)	(*a*)	(*a*)
United States of America	4,245,377	3,583,080	1,380,758	1,022,238	915,403
Australia	**1,592,034**	**1,153,787**	**751,279**	**656,867**	**657,213**
Philippine Islands ..	903,265	158,726	13,764	(*a*)	13,490
Korea	948,447	868,069	411,529	118,957	96,452
Mexico	923,819	801,325	631,537	508,882	524,017
Japan, including Formosa ..	852,000	(*a*)	(*a*)	(*a*)	(*a*)
Rhodesia	815,191	761,164	657,387	593,038	568,241

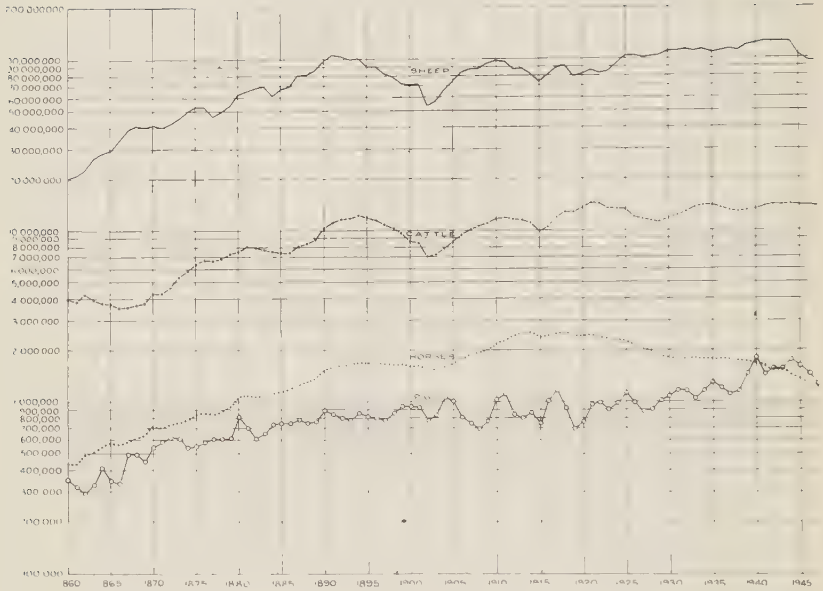
(*a*) Not available.

VALUE OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1850 TO 1945.



EXPLANATION.—The upper curve represents the total value of mineral production while the vertical distances between the curves represent the value of production of each mineral.

LIVE STOCK—AUSTRALIA, 1860 TO 1947.



(See page 853.)

Explanation.—This is a ratio graph, the vertical scale being logarithmic and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

The next table shows the average yearly production in the principal gold-producing countries for the decennium 1936 to 1945 :—

GOLD : AVERAGE ANNUAL PRODUCTION IN PRINCIPAL COUNTRIES, 1936 TO 1945.

Country.	Quantity.	Country.	Quantity.
	Fine oz.		Fine oz.
Union of South Africa ..	12,794,333	Mexico	751,468
U.S.S.R (Russia) ..	(*a*) 4,500,750	Rhodesia	743,117
Canada	4,242,180	Japan, including Formosa	(*a*) 752,868
United States of America ..	3,333,433	Korea	634,777
Australia	**1,216,271**	Philippine Islands ..	569,201

(*a*) Average eight years 1933 to 1940.

5. **Employment in Gold-mining.**—The number of persons engaged in gold-mining in each State at various intervals since 1901 is shown in the following table. The figures include prospectors, etc., so far as they are ascertainable, and include those who may not have worked during the whole of the year.

GOLD-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1901 ..	12,064	27,387	9,438	(*a*)1,000	19,771	1,112	(*a*) 200	70,972
1903(*b*) ..	11,247	25,208	9,229	(*a*)1,000	20,716	973	(*a*) 200	68,573
1913 ..	3,570	11,931	3,123	800	13,445	481	175	33,525
1923 ..	1,141	2,982	603	32	5,555	119	30	10,462
1933 ..	6,913	6,126	4,161	231	9,900	229	95	27,655
1938 ..	3,764	6,315	3,378	158	15,374	141	267	29,397
1942 ..	1,571	1,661	1,075	34	8,123	33	50	12,547
1943 ..	771	719	1,297	29	5,079	19	40	7,954
1944 ..	512	550	1,243	28	4,614	23	45	7,015
1945 ..	509	643	1,256	16	4,818	15	46	7,303

(*a*) Estimated. (*b*) Year of maximum production for Australia.

Owing to causes referred to earlier in this section, the number employed in gold-mining had dwindled to the comparatively small figure of 6,108 in 1929. Stimulated by the enhanced price of gold, employment in the industry rose more than five-fold to 33,113 in 1935, but thereafter the numbers employed declined each year to 7,015 in 1944. In 1945, following the cessation of hostilities and a relaxation of man-power control, an increase of nearly 300 was recorded.

6. **Tax on Gold.**—(i) *General.* The Commonwealth Government imposed a tax on gold produced in Australia or in any Territory under its jurisdiction and delivered to the Commonwealth Bank on or after 15th September, 1939. The rate of tax was fixed at 50 per cent. of the price payable by the Bank in excess of £A9 per fine oz.

The tax on gold yielded £1,214,621 during 1939–40 ; £1,452,260 during 1940–41 ; £1,030,425 in 1941–42 ; £524,694 in 1942–43 ; £317,720 in 1943–44 ; £342,457 in 1944–45 ; £383,552 in 1945-46 and £556,435 in 1946-47. This tax was suspended as from 20th September, 1947 by the Gold Tax Suspension Act 1947.

(ii) *Development of Gold Mining Industry.* Assistance amounting to £150,000 was given to the gold-mining industry, through the medium of the States, during 1940-41. In addition, an amount approximating £150,000 was paid during 1942 and subsequent years for the maintenance of those mines where, under man-power control, miners were transferred to other activities more directly associated with the war effort.

The suspension of the tax on gold referred to above was designed to assist the gold mining industry in meeting higher costs and to encourage a greater output.

7. **Bounty on Production.**—A reference to the bounty provided by the Commonwealth on gold production in Australia appears in Official Year Book No. 32, p. 579.

§ 3. Silver, Lead and Zinc.

1. **Production.**—(i) *General.* The values of the production of silver, silver-lead ore and lead from the various States during each of the years 1938 and 1942 to 1945 are shown in the following table :—

SILVER AND LEAD : VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
	£	£	£	£	£	£	£	£
1938 ..	3,520,465	647	926,614	70	29,477	267,773	..	4,745,046
1942 ..	4,168,421	2,227	1,034,550	477	23,916	358,966	..	5,588,557
1943 ..	3,752,672	2,278	230,837	62	16,475	333,058	..	4,335,382
1944 ..	4,068,935	1,280	14,733	309	15,807	313,618	..	4,414,682
1945 ..	4,625,665	1,622	17,788	601	22,757	259,560	..	4,927,993

(ii) *New South Wales.* (*a*) *General.* The figures for New South Wales for 1945 include silver to the value of £20,703 and silver-lead ore and concentrates valued at £4,604,962. Since the Sulphide Corporation Ltd. ceased smelting operations in 1922 the silver (metal) has been obtained chiefly in the refining of gold and copper ores, and there has been no production of lead (pig). It may be noted here that the bulk of the carbonate and siliceous ore from the Broken Hill field is sent for treatment to Port Pirie in South Australia, while the remainder of the ore is concentrated on the field and then dispatched to Port Pirie for refining. The output of silver-lead ores and concentrates in 1945 decreased by 34,758 tons compared with the previous year, but owing to increased prices the value rose by more than £558,000.

It must be understood that the totals for New South Wales in the table above represent the net value of the product (excluding zinc) of the silver-lead mines of the State. In explanation of the values thus given, it may be noted that, as previously mentioned, the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead and zinc is thus to some extent understated.

(*b*) *Broken Hill.* Broken Hill, in New South Wales, is the chief centre of silver production in Australia. A description of the silver-bearing area in this district is given in earlier issues of the Official Year Book. (See No. 4, p. 506).

The value of output of the principal mines in the Broken Hill field totalled £207.3 million to the end of 1946.

(*c*) *Other Areas.* Silver is found in various other localities in New South Wales, the most important being at Captain's Flat where Lake George Mines produced concentrates estimated to contain 173,895 oz. of silver, 7,944 tons of lead and 13,399 tons of zinc in 1945. Production on a small scale recommenced during 1946 at Yerranderie.

(iii) *Victoria.* The silver produced in 1945 amounted to 14,861 oz., valued at £1,622, and was obtained in the refining of gold at the Melbourne Mint.

(iv) *Queensland.* The production of silver decreased from 3,055,435 oz. in 1942 to 112,710 oz. in 1945, whilst lead production dropped from 33,512 tons in 1942 to nil in 1945. This decrease was due to suspension of silver-lead and zinc operations by Mount Isa Mines Ltd. during the time it was engaged in producing copper.

(v) *South Australia.* In 1945 production amounted to 3,241 oz. valued at £513.

(vi) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1945 was 146,025 fine oz. valued at £22,757.

(vii) *Tasmania.* The silver produced in 1945 amounted to 816,157 fine oz., valued at £102,101, and the lead to 6,298 tons, valued at £157,459, produced in the Western Division of the State. Compared with previous years this represents a considerable decrease as regards both quantity and value. About 136,390 oz. of the total silver output were contained in silver-lead, 24,232 oz. in the blister copper produced by the Mount Lyell Co., and 655,535 oz. in zinc lead ore.

(viii) *Northern Territory.* A rich deposit of silver-lead and copper ore was located in 1930 at the Jervois Range about 200 miles east of Alice Springs. Development is hindered, however, by transport difficulties and lack of permanent water. Rich sulphides have been found at Barrow Creek. Production during the past ten years has been very intermittent and not very great in the years when any output was recorded.

2. **Production, Sales and Stocks of Refined Silver, 1939 and 1942-1946.**—The following table sets out as fully as possible the total production and distribution of refined silver in Australia. It is based on the data published by the Australian Mines and Metals Association and shows the stocks of refined silver in Australia, production and sales (locally and overseas) during the years 1939 and 1942 to 1946. Comparable figures for the year 1938 are not available.

REFINED SILVER : PRODUCTION, SALES AND STOCKS, AUSTRALIA.

Particulars.	1939.	1942.	1943.	1944.	1945.	1946.
	'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.
Stock from previous year ..	122	419	402	437	414	465
Production for year ..	9,552	9,508	8,263	7,176	7,464	6,183
Total Supply ..	9,074	9,927	8,665	7,613	7,878	6,648
Sold to Australian consumers	1,794	9,495	8,228	7,199	7,413	6,407
Exported or sold for export	7,518	30	..	..	..	..
Stock on hand at end of year	362	402	437	414	465	241
Total Disposals and Stocks	9,674	9,927	8,665	7,613	7,878	6,648
Silver Contents of Ores and Concentrates Produced ..	15,320	14,242	10,330	9,366	8,077	9,073

3. **World Production.**—The world's production of silver during the years 1938 and 1941 to 1945 is estimated to have been as follows :—

SILVER : WORLD PRODUCTION.

1938.	1941.	1942.(*a*)	1943.(*a*)	1944.(*a*)	1945.(*a*)
'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.	'000 fine oz.
267,765	262,854	218,721	193,231	169,466	142,731

(*a*) Output of reporting countries.

The world's production of silver during 1938 amounted to about 268 million fine oz., of which Australia contributed 13.9 million fine oz., or 5.2 per cent. The production for Australia includes an estimate of the silver contents of the ores, bullion and concentrates exported.

The estimated yields of the principal silver-producing countries in 1945 (or the latest year available) were as follows :—

SILVER : PRODUCTION IN PRINCIPAL COUNTRIES, 1945.

Country.	Production.	Country.	Production.
	Fine oz. ('000 omitted.)		Fine oz. ('000 omitted.)
Mexico	61,098	British India (including Burma)	(a) 6,175
United States of America ..	29,046	Belgian Congo	4,138
Canada	12,943	Yugoslavia	(b) 2,570
Peru	12,887	Union of South Africa ..	1,243
Japan	(a) 11,000	Argentina	(c) 1,134
Australia	**8,077**	Chile	1,000
U.S.S.R. (Russia) ..	(a) 7,000	Newfoundland	665
Germany	(b) 7,000		
Bolivia	6,684		

(a) Year 1940. (b) Year 1939. (c) Year 1942.

4. **Production of Lead in Australia.**—For reasons already mentioned, difficulties arise when an attempt is made to show the production of lead by States. This is due to the fact that production is largely recorded in terms other than metal. The chief sources of production are New South Wales, Queensland and Tasmania.

In the following table details of production, sales, and stocks are given for the years indicated and have been compiled from data supplied by the Australian Mines and Metals Association. Comparable figures for the year 1938 are not available.

REFINED LEAD : PRODUCTION, SALES AND STOCKS, AUSTRALIA.

Particulars.	1939.	1942.	1943.	1944.	1945.	1946.
	Ton.	Ton.	Ton.	Ton.	Ton.	Ton.
Stocks from previous year ..	10,290	79,487	30,040	73,720	18,959	17,418
Production for year ..	199,437	206,929	180,629	154,547	155,852	137,459
Total Supply ..	209,727	286,416	210,669	228,267	174,811	154,877
Sold to Australian consumers	32,217	48,122	40,583	29,853	30,198	42,040
Exported or sold for export	164,684	208,254	96,366	179,455	127,195	88,111
Stock on hand at end of year	12,826	30,040	73,720	18,959	17,418	24,726
Total Disposals and Stocks	209,727	286,416	210,669	228,267	174,811	154,877
Lead Contents of Ores and Concentrates Produced ..	280,003	263,183	206,376	189,485	164,741	184,314

5. **Prices of Silver, Lead and Zinc.**—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, the average prices in sterling of each metal on the London Metal Exchange during the years shown have been incorporated in the table hereunder. During 1942, 1943 and 1944, prices remained unchanged at the 1941 levels.

PRICES OF SILVER, LEAD AND SPELTER.

(In Sterling).

Metal.		1938.	1940.	1941.	1945.	1946.	1947.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Silver	(Fine) per oz.	0 1 9.06	0 2 0.04	0 2 1.31	0 2 6.51	0 4 0.7	0 3 8.4
Lead ..	per ton	15 6 6	*a*25 0 0	*a*25 0 0	*a*27 15 11	48 1 7	85 1 7
Spelter	,, ,,	14 1 7	*a*25 15 0	*a*25 15 0	*a*28 16 7	43 1 11	70 0 0

(*a*) Maximum price as fixed by the British Ministry of Supply.

The prices of lead and zinc in Australia were fixed by Prices Regulation at £A22 per ton in February, 1940, and have continued at that level up to December, 1948. In January, 1949, the local price of lead was increased to £A35 per ton and zinc to £A40 per ton. The price of silver, however, was not so fixed and the following prices per fine oz. in Australia represent the export parity calculated directly from London prices :— 2s. 3.8d. in 1939 ; 2s. 6.1d. in 1940 ; 2s. 7.5d. in the years 1941 to 1944 ; 3s. 2.2d in 1945 ; 5s. 0.8d. in 1946 and 4s. 7.6d. in 1947.

6. **Employment in Silver, Lead and Zinc-mining.**—The average number of persons employed in mining for these metals during each of the years 1938 and 1942 to 1945 is given below :—

SILVER, LEAD AND ZINC-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1938 ..	5,612	530	..	4	421	3	6,570
1942 ..	4,104	471	..	..	509	..	5,084
1943 ..	3,982	239	..	2	491	..	4,714
1944 ..	3,896	..	..	..	470	..	4,366
1945 ..	3,929	34	..	..	445	..	4,408

§ 4. Copper.

1. **Production.**—Copper is widely distributed throughout Australia. South Australia and New South Wales were once large producers but the output of these States is much less than it was in earlier years. The chief sources of production are now centred in Queensland and Tasmania.

The values of the local production as reported and credited to the mineral industry for the years 1938 and 1942 to 1945 are shown hereunder. Quantities for Australia as a whole, as returned by the several State Mines Departments, are appended at the foot of the table :—

COPPER : PRODUCTION.

State.	1938.	1942.	1943.	1944.	1945.
	£	£	£	£	£
New South Wales ..	87,905	277,376	379,800	309,900	305,000
Queensland.. ..	203,967	625,375	1,111,049	1,644,747	1,500,662
South Australia .	15,333	31,715	10,100	12,115	11,674
Western Australia ..	1,275	738	33	(a) 367	364
Tasmania	580,238	730,675	691,199	633,188	463,204
Northern Territory ..	4,362	..	2,393	1,878	3,811
Australia	893,080	1,665,879	2,194,574	(a)2,602,195	2,284,805
	Tons.	Tons.	Tons.	Tons.	Tons.
Ingot, Matte, etc. ..	18,751	21,699	25,804	(a) 20,365	23,850
Ore and Concentrates	935				

(a) Incomplete.

In the following table, details of the production, sales and stocks of refined copper, as compiled by the Australian Mines and Metals Association, are given for the years indicated. Comparable figures for the year 1938 are not available :—

REFINED COPPER : PRODUCTION, SALES AND STOCKS, AUSTRALIA.

Particulars.	1939.	1942.	1943.	1944.	1945.	1946.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Stocks from previous year ..	1,342	988	972	587	800	2,611
Production for year ..	17,867	24,609	20,457	19,898	20,498	22,659
Total	19,209	25,597	21,429	20,485	21,298	25,270
Sold to Australian consumers	18,808	24,625	20,842	19,685	18,687	22,957
Exported or sold for export	100		..	..	..	1,000
Stocks on hand at end of year	301	972	587	800	2,611	1,313
Total	19,209	25,597	21,429	20,485	21,298	25,270

2. **Sources of Production.**—(i) *New South Wales.* Copper ores and concentrates produced in New South Wales in 1945 amounted to 3,050 tons with an estimated metallic content of 1,830 tons of copper.

(ii) *Queensland.* In 1945 the yield of metallic copper in this State amounted to 15,007 tons compared with 15,804 tons in 1944 and 10,758 tons in 1943.

The increased production was due principally to operations at Mount Isa where, in 1943, mining for copper was undertaken to meet the war-time demand whilst mining in this field for silver-lead and zinc was suspended. The returns from the chief producing areas in 1945 were as follows :—Mount Isa, 11,763 tons, and Mount Morgan, 3,005 tons.

(iii) *South Australia.* Deposits of copper are found over a large portion of South Australia and its total production to date exceeds that of any other State. Since the exhaustion of the ore reserves on the principal copper fields, output has diminished to negligible dimensions and in 1945, at 134 tons, was less than production in Queensland, Tasmania and New South Wales. Drilling operations were continued during 1945 on the Wallaroo lode.

(iv) *Western Australia.* During 1945, the quantity of copper reported was 40 tons valued at £364 compared with 46 tons for £367 in 1944.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1945 was 7,473 tons, valued at £463,294, the Mount Lyell Mining and Railway Co. Ltd. accounting for the greater part of the production. This company treated 32,396 tons of ore and concentrates and produced blister copper, containing copper (7,197 tons), silver (24,232 oz.) and gold (4,853 oz.), the whole being valued at £771,102.

(vi) *Northern Territory.* Copper has been found at various places in the Territory. In 1945, 146 tons of concentrates were produced compared with 68 tons in 1944, and 96 tons in 1939.

3. **World Production of Copper.**—The world's production of copper during the years 1938 and 1942 to 1945 was estimated as follows. The figures have been obtained from authoritative sources but some countries did not report their production during the war years and in these cases estimates have been substituted.

COPPER : WORLD PRODUCTION.

(Tons of 2,240 lb.)

1938.	1942.	1943.	1944.	1945.
2,020,000	2,422,000	2,449,000	2,088,000	1,768,000

The yields from the principal copper-producing countries reporting in 1945 were as follows :—

COPPER : PRODUCTION IN PRINCIPAL COUNTRIES, 1945.

(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
United States of America ..	751,000	Yugoslavia	(*a*)
Chile	455,000	**Australia**	**25,850**
Canada	202,000	Peru	24,000
Northern Rhodesia ..	194,000	Germany	(*a*)
Belgian Congo	(*a*)	Turkey	9,000
U.S.S.R. (Russia) ..	(*a*)	Belgium	8,000
Mexico	61,000	Spain	6,000
Japan	28,000	Bolivia	6,000

(*a*) Not available.

During 1945 the share of the United States of America in the world's copper production amounted to 42 per cent. while the Australian proportion was about 1.5 per cent.

4. **Prices.**—At the outbreak of war in 1939, the price of copper in Australia and the United Kingdom was fixed by Regulation. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF COPPER IN AUSTRALIA AND UNITED KINGDOM.

Country.	December, 1939.	1944.	1945.	1946.	1947.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Australia—in Australian currency	63 17 6	105 0 0	100 0 0	95 0 0	118 10 0
United Kingdom—in Sterling	62 0 0	62 0 0	62 0 0	77 4 0	130 12 4

5. **Employment in Copper-mining.**—The number of persons employed in copper-mining during each of the years 1938 and 1942 to 1945 was as follows :—

COPPER-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1938	13	213	67	4	1,015	5	1,317
1942	79	419	52	5	1,595	7	2,157
1943	260	864	36	1	1,577	1	2,739
1944	210	919	37	..	1,549	4	2,719
1945	145	814	3	2	1,473	5	2,442

In 1917 over 9,000 persons were engaged in copper-mining.

§ 5. Tin.

1. **Production.**—The values of the production of tin as reported to the Mines Departments in each of the States during the years 1938 and 1942 to 1945 are given in the following table. A separate line is appended showing the production of refined tin as recorded by the Australian Mines and Metals Association for the years indicated.

TIN : PRODUCTION.

State.	1938.	1942.	1943.	1944.	1945.
	£	£	£	£	£
New South Wales ..	286,768	417,210	403,320	309,860	291,788
Victoria..	28,650	19,173	14,162	12,835	9,869
Queensland	141,547	150,454	167,176	275,185	207,948
South Australia	..	..	10	..	..
Western Australia ..	7,421	4,634	2,315	(b) 2,351	4,370
Tasmania	244,037	297,919	246,218	235,612	240,369
Northern Territory ..	3,205	6,627	5,594	2,086	5,026
Total	711,628	896,017	838,795	(b)837,929	759,370
	Tons.	Tons.	Tons.	Tons.	Tons.
Refined Tin	(a)	3,024	2,565	2,442	2,359

(a) Not available. (b) Incomplete.

2. **Sources of Production.**—(i) *New South Wales.* Production of tin in 1945 was stated at 776 tons of ingots, valued at £291,788, compared with 824 tons, valued at £309,860, in 1944. A large proportion of the output in this State is obtained in normal years by dredging, principally in the New England district.

(ii) *Victoria.* The production of tin in this State is obtained chiefly by dredging in the Beechworth district and by mining in the Toora district in Gippsland. The production in 1945 amounted to 42 tons of concentrates, valued at £9,869, compared with 55 tons, valued at £12,835, in 1944.

(iii) *Queensland.* The chief producing districts in Queensland during 1945 were Herberton, 821 tons, valued at £182,432 ; Cooktown, 27 tons, £6,060 ; Stanthorpe, 38 tons, £9,527 ; Chillagoe, 25 tons, £5,404 and Kangaroo Hills, 16 tons, £3,883. The total production in 1945 amounted to 930 tons, valued at £207,948, compared with 1,232 tons, valued at £275,185 in 1944. It is interesting to compare these production figures with those recorded in the early years of this century when the output ranged between 2,000 and 5,000 tons per annum.

(iv) *Western Australia.* The quantity of tin reported in this State in 1945 amounted to 22 tons, valued at £4,370, and was obtained mainly in the Pilbara and Greenbushes fields.

(v) *Tasmania.* For 1945 the output amounted to 801 tons of tin, valued at £240,369 a decrease of 9 tons on the output of the previous year but, due to the rise in prices, the value was nearly £4,000 higher.

(vi) *Northern Territory.* The production for 1945 amounted to 23 tons of concentrates valued at £5,026, compared with 11 tons of concentrates valued at £2,086 produced during 1944.

3. **World Production.**—The world's production of tin during each of the years 1938 and 1940 to 1944 was as follows :—

TIN : WORLD PRODUCTION.

(Tons of 2,240 lb.)

1938.	1940.	1941.	1942.	1943.	1944.
148,600	235,500	241,700	107,900	130,200	97,400

The production of tin reached its maximum in 1941 when 241,700 tons were recorded. The following are the chief producing countries of the world :—Malaya, Netherlands East Indies, Bolivia, Belgian Congo, Nigeria and Siam. Normally these countries produce about three-quarters of the total production.

The yields from the principal producing countries in 1944 were as follows :—

TIN : PRODUCTION IN PRINCIPAL COUNTRIES, 1944.

(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
Bolivia	38,809	China	2,160
Belgian Congo	16,858	United Kingdom ..	1,289
Nigeria	12,512	Argentina	986
Malaya	8,000	Burma	775
Netherlands East Indies ..	6,400	Portugal	610
Siam	3,296	Japan	374
Australia	**2,547**	Indo-China	357

Australia's share of the world's tin production, estimated at 97,400 tons in 1944, was about 2.6 per cent.

4. **Prices.**—At the outbreak of war in September, 1939, the price of tin in Australia and London was fixed by Regulation. Details of the movement in average prices for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF TIN IN AUSTRALIA AND UNITED KINGDOM.

Country.	December, 1939.	1944.	1945.	1946.	1947.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Australia—In Australian currency	299 0 0	376 0 0	376 0 0	376 0 0	438 15 0
United Kingdom—in Sterling	271 0 0	300 0 0	300 0 0	336 2 10	425 18 7

5. **Employment in Tin-mining.**—The number of persons employed in tin-mining during the years 1938 and 1942 to 1945 was as follows :—

TIN-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Victoria. (a)	Q'land.	W. Aust.	Tas.	Nor. Terr.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1938	1,440	5	1,263	73	1,123	15	3,919
1942	1,243	3	589	15	801	(b) 49	(c) 2,702
1943	1,175	4	599	7	847	(b) 45	(c) 2,679
1944	927	26	532	5	834	(b) 46	2,370
1945	814	4	465	13	736	(b) 48	2,080

(a) The tin produced in Victoria was raised by a dredging company operating primarily for gold. (b) Including some engaged in mining for tantalite. (c) Includes two miners in South Australia.

§ 6. Zinc.

1. **Production : States.**—(i) *New South Wales.* The production of zinciferous concentrates is confined chiefly to the Broken Hill district of New South Wales, where zincblende forms one of the chief constituents in the enormous deposits of sulphide ores. The re-opening in 1937 of the mine at Captain's Flat by the Lake George Mines, Ltd. was an important development. Production commenced in 1939. Details of the zinc contents of ores and concentrates produced at this mine are given in the table below.

As the metallic contents of the bulk of the concentrates, etc., produced from these fields are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. During 1945 the zinc concentrates produced amounted to 205,284 tons, valued at £1,073,340. Portion of the zinc concentrates produced is treated at Risdon in Tasmania and the balance is exported, mainly to the United Kingdom and the United States of America. The production from these concentrates treated by the Electrolytic Zinc Company of Australia Ltd. at Risdon amounted to 65,263 tons of zinc, 190.87 tons of cadmium and 13.7 tons of cobalt oxide in 1945. This is referred to in the Tasmanian production below.

(ii) *Queensland.* The production of zinc in the Cloncurry district of Queensland during 1943 was 5,077 tons, valued at £76,158, compared with 21,035 tons, valued at £394,412 in 1942 and 4,411 tons, valued at £68,863, obtained in 1935. The metal was produced by the Mount Isa Mines Ltd. and was exported overseas as concentrates. There was no production in 1944 and 1945 but operations were resumed in 1946, the output reaching 11,361 tons.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Tasmania.* The production of zinc from Tasmanian ores was suspended from 1931 to 1935. Developmental work on the Mount Read-Rosebery district was continued during that period and production commenced in 1936. In 1937—the first full year's operations since the inception of milling at Rosebery—23,481 tons, valued at £525,824, were obtained. In 1945, 15,609 tons of zinc, valued at £407,307, were obtained from Tasmanian ores, as well as 29 tons of cadmium valued at £13,161 and 5 cwt. of cobalt oxide valued at £136.

In addition to the foregoing the Electrolytic Zinc Company of Australia Ltd. at Risdon operated on raw materials obtained from Broken Hill in New South Wales. Production from this source during 1945 amounted to 65,263 tons of slab zinc, valued at £1,501,049, 190.87 tons of cadmium, valued at £85,510 and 13.7 tons of cobalt oxide, valued at £6,291.

2. **Production : Australia.**—The details furnished above do not adequately convey the potentialities of Australia as a producer of zinc. A better indication is given in the following table which shows the estimated zinc contents of ores and concentrates produced in Australia according to data compiled by the Australian Mines and Metals Association. Comparable figures for 1938 are not available.

ZINC CONTENTS OF ORES AND CONCENTRATES PRODUCED.

Year.	New South Wales.			Queensland.	Tasmania.	Australia.
	Broken Hill.	Lake George.	Total.	Mt. Isa.	Rosebery.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1939	145,207	11,850	157,057	29,092	31,107	217,256
1940	161,449	19,358	180,807	29,584	32,338	242,729
1941	171,872	18,930	190,802	27,447	30,595	248,844
1942	151,128	21,309	172,437	21,035	28,362	221,834
1943	128,092	23,242	151,334	5,077	26,430	182,841
1944	128,384	19,657	148,041	..	26,317	174,358
1945	118,566	11,893	130,459	..	19,854	150,313
1946	142,983	15,187	158,170	11,269	22,678	192,117

In the next table details are given of the quantity of refined zinc produced in Australia, the quantity sold and stocks held for the years 1939 and 1942 to 1946, according to data compiled by the Australian Mines and Metals Association. Comparable figures for 1938 are not available.

REFINED ZINC : PRODUCTION, SALES AND STOCKS, AUSTRALIA.

Particulars.	1939.	1942.	1943.	1944.	1945.	1946.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Stocks from previous year ..	3,225	2,115	4,420	3,314	11,295	4,786
Production for year ..	71,220	74,282	75,756	78,716	83,773	76,316
Total	74,445	76,397	80,176	82,030	95,068	81,102
Sold to Australian consumers	31,088	54,526	32,958	19,828	26,639	35,984
Exported or sold for export ..	43,137	17,451	43,904	50,907	63,643	44,587
Stocks on hand at end of year	220	4,420	3,314	11,295	4,786	531
Total	74,445	76,397	80,176	82,030	95,068	81,102

3. **World Production.**—The world's production of zinc ore in terms of metal during the seven years 1938 to 1944, was as follows :—

ZINC : WORLD PRODUCTION.

(Tons of 2,240 lb.)

1938.	1939.	1940.	1941.	1942.	1943.	1944.
1,840,000	1,920,000	1,970,000	2,110,000	2,160,000	2,110,000	2,030,000

Particulars of the production of zinc ore, expressed in terms of metal, are given in the following table for the principal producing countries for 1944.

ZINC : PRODUCTION IN PRINCIPAL COUNTRIES, 1944.

(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
United States of America ..	641,645	Newfoundland	53,125
Canada	286,815	Sweden	32,389
Germany	250,000	Spain ..	30,000
Mexico	215,507	Italy	19,224
Australia	**174,358**	Rhodesia	18,872
U.S.S.R. (Russia) ..	(*a*)	Bolivia	16,061
Japan	74,672	Belgian Congo	15,300
Peru	56,207		

(*a*) Not available.

The production of Australia quoted above represents the metallic contents of zinc ores produced during 1944 and is equal to 8·6 per cent. of world output. The quantity of zinc metal extracted in Australia in that year was 78,716 tons.

4. **Prices and Employment.**—Information regarding prices of zinc and employment in zinc-mining will be found on page 821.

§ 7. Iron.

1. **General.**—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easy of access are those situated at Yampi Sound, Western Australia and at Iron Knob, South Australia. Estimates of the reserves at these centres place the quantities available at approximately 100 million tons and 150 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938. A survey of the iron ore resources of Australia undertaken by the Commonwealth Geologist was completed at the end of 1940.

2. **Production.**—(i) *New South Wales.* The production in 1935 of pig-iron from ores mined in New South Wales amounted to 4,580 tons, valued at £18,320. No iron ores were produced from 1935 until 1941 when 202,180 tons of ore were mined. In 1942, 375,297 tons were mined but only 86,185 tons in 1945. For many years the chief source of supply has been South Australia.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1945 the iron oxide raised amounted to 8,062 tons, valued at £5,549. Ironstone flux amounting to 2,432 tons, valued at £950 was raised in the Goulburn Division during 1933. This is the only production recorded since 1922.

(ii) *Queensland.* Extensive deposits of iron ore are known to exist in Queensland. Their location and size, however, in comparison with the more favourable deposits of South Australia, preclude their exploitation. In 1945, 1,715 tons of ore were obtained and used as a flux at the Chillagoe State Smelters.

(iii) *South Australia.* The production from the deposits worked by the Broken Hill Pty. Co. Ltd., at Iron Knob and at Middlebank reached its maximum in 1939, when 2,571,759 tons of ore valued at £2,957,523 were raised. The production of 1,519,594 tons, valued at £1,747,533, for 1945, represents a decrease of 1,052,165 tons and £1,209,990 on the 1939 figures.

(iv) *Western Australia.* The development of the deposits at Yampi Sound was discontinued in 1938 as a result of the embargo on exports. However, in 1942, production of iron ore was reported for the first time since 1938 ; it amounted to 150 tons, valued at £225. Production in 1943 amounted to 84 tons valued at £128, but up to 1945 no further production had been recorded.

At the end of 1944 Australian Iron & Steel Co. Ltd., on behalf of Broken Hill Proprietary Co. Ltd., started preliminary work connected with the development and mining of the iron ore on Cockatoo Island, and it was estimated that substantial output would not be attained for two years. The ore would be mixed with the iron ore from the Iron Monarch mine in South Australia to reduce the manganese content of the furnace charge to an acceptable figure. The Iron Monarch ore has a high manganese content.

The production of pyrites from which sulphuric acid is obtained for the manufacture of superphosphate has shown a marked expansion in Western Australia. Since 1942, when production amounted to 368 tons, it has risen to 66,504 tons in 1945.

(v) *Tasmania.* There has been no production of ironstone in Tasmania since 1943 when 7 tons, valued at £14 were produced. The production of iron pyrites, which in 1945 amounted to 40,168 tons, valued at £50,208, is not included in the mineral returns, but is credited to the manufacturing industry, as it is a by-product from the flotation of copper ore at Mount Lyell. This product is exported to the mainland, where the sulphur contents have displaced imported sulphur in the manufacture of chemical fertilizers.

Reference to the iron ore deposits in the various States appears in preceding issues of the Official Year Book (see No. 22, pp. 777–9).

3. **Iron and Steel Bounties.**—During 1945–46 the bounties paid under the Bounties Acts on articles manufactured from locally produced materials were as follows :—Wire-netting, £349 ; traction engines, £10,095. Corresponding amounts paid during 1944–45 were £496 and £13,317 respectively.

4. **Production of Iron and Steel—Principal Countries.**—(i) *General.* Particulars of the production in the principal countries during the years 1938, 1944 and 1945 according to figures published by the Imperial Institute and the Statistical Office of the United Nations are shown in the next table.

PIG-IRON AND STEEL : PRODUCTION IN PRINCIPAL COUNTRIES.

Country	Pig-iron and Ferro-alloys.			Steel Ingots and Castings.		
	1938.	1914.	1945.	1938.	1944.	1945.
	Thousands of Tons (2240lb.).			Thousands of Tons (2240lb.).		
United States America	19,161	56,131	48,339	28,350	80,037	71,138
Germany	17,760	13,158	(a)	22,268	18,005	(a)
U.S.S.R. (Russia) ..	14,756	(a)	(a)	17,500	(a)	(a)
United Kingdom ..	6,761	6,737	7,096	10,398	12,142	11,819
Canada	761	1,807	1,759	1,155	2,693	2,574
France	5,977	2,847	1,169	6,040	3,043	1,629
Australia (b) ..	**930**	**1,305**	**1,118**	**1,230**	**1,641**	**1,447**
India	1,571	1,443	1,334	936	1,369	1,275
Sweden	701	872	764	957	1,179	1,181
Japan	2,535	2,637	496	6,367	6,725	1,051
Czechoslovakia ..	1,215	1,535	567	1,710	2,457	933
Belgium	2,388	701	720	2,243	621	720
Spain	433	552	463	567	604	551
Union of South Africa	290	464	547	341	476	531
Poland	948	(a)	248	1,527	1,380	531
Luxemburg.. ..	1,526	1,327	307	1,514	1,249	260
Brazil	..	287	256		217	203
Mexico	110	133	..	72	178	180
Austria	542	942	(a)	663	979	(a)
Hungary	330	390	12	638	638	126
Italy	914	227	(a)	2,271	1,063	(a)
Total—All Countries	81,000	112,000	(a)	107,600	158,000	(a)

(a) Not available. (b) Year ended 30th June.

The principal producers in Australia are the Broken Hill Pty. Co. Ltd. and the Australian Iron and Steel Ltd., the former situated at Newcastle and the latter at Port Kembla in New South Wales. In South Australia, the Broken Hill Pty. Co. Ltd. established a blast furnace at Whyalla which was blown in during May, 1941, and continued to operate until May, 1944. Production was resumed during April, 1946.

(ii) *Australia.* The production of steel and pig-iron in Australia, of which New South Wales is the main producing State, is shown for each of the years 1936–37 to 1945–46.

PIG-IRON AND STEEL : AUSTRALIAN PRODUCTION.

Year ended 30th June—	Pig-iron.	Steel Ingots.	Blooms and Billets.	Year ended 30th June—	Pig-iron.	Steel Ingots.	Blooms and Billets.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1937 ..	913,406	1,079,854	963,993	1942 ..	1,557,641	1,699,793	1,699,447
1938 ..	929,676	1,167,340	1,021,243	1943 ..	1,399,306	1,632,825	1,583,417
1939 ..	1,104,605	1,171,787	1,120,142	1944 ..	1,395,357	1,527,564	1,393,919
1940 ..	1,212,006	1,292,115	1,266,156	1945 ..	1,117,709	1,356,913	1,236,528
1941 ..	1,475,707	1,647,108	1,631,679	1946 ..	906,283	1,061,918	1,036,501

§ 8. Other Metallic Minerals.

1. **Wolfram and Scheelite.**—Tungsten ores occur in several of the States, in the Northern Territory and on King Island in Bass Strait, the last-named being included with Tasmania. Production during 1938 and the four years 1942 to 1945 is shown in the following table :—

WOLFRAM AND SCHEELITE : PRODUCTION.

Particulars.		1938.	1942.	1943.	1944.	1945.
			Wolfram.			
New South Wales	cwt.	1,877	760	840	605	620
	£	25,740	11,655	14,033	10,982	9,604
Victoria.. ..	cwt.	..	42	282	60	..
	£	..	1,059	5,041	1,005	..
Queensland ..	cwt.	3,015	3,803	3,027	3,931	2,599
	£	30,779	63,296	56,778	73,445	48,176
South Australia ..	cwt.	..	..	3	1	..
	£	..	6	10	10	..
Western Australia	cwt.	..	4	..	..	..
	£	..	115	80	..	..
Tasmania ..	cwt.	5,982	3,660	4,600	4,838	4,220
	£	63,348	58,397	82,965	86,749	69,896
Northern Territory	cwt.	8,694	3,016	3,769	1,841	2,540
	£	78,277	43,734	58,166	31,583	42,937
Total ..	cwt.	19,568	11,285	12,521	11,276	9,979
	£	198,144	178,262	217,073	203,774	170,613
			Scheelite.			
New South Wales	cwt.	184	260	460	360	340
	£	2,472	5,807	9,185	7,247	7,111
Queensland ..	cwt.	13	28	48	52	101
	£	93	546	889	988	2,018
Western Australia	cwt.	..	1	5	39	16
	£	..	357	2,664	21,420	8,946
Tasmania ..	cwt.	611	4,300	3,984	644	10,560
	£	6,193	71,353	68,908	10,848	158,093
Total ..	cwt.	808	4,589	4,497	1,095	11,017
	£	8,758	78,063	81,646	40,503	176,168

2. **Cadmium and Cobalt.**—Cadmium is extracted at Risdon in Tasmania as a by-product from ores mined at Broken Hill in New South Wales, and on the west coast of Tasmania.

Cobalt as an oxide is recovered from the treatment of silver, lead and zinc ores of Broken Hill and Tasmanian origin in the same way as is cadmium. The production of cobalt and cadmium is shown for the years 1938 and 1942 to 1945 in the following table :—

CADMIUM AND COBALT: PRODUCTION.

Year.	Cadmium.				Cobalt Oxide.			
	Extracted in Tasmania from Ores mined in—				Extracted in Tasmania from Ores mined in—			
	New South Wales.	Tasmania.	Total.		New South Wales.	Tasmania.	Total.	
	Cwt.	Cwt.	Cwt.	£	Cwt.	Cwt.	Cwt.	£
1938	2,943	980	3,923	79,406	377	12	389	8,084
1942	2,436	828	3,264	72,218	325	45	370	8,981
1943	2,344	807	3,151	70,609	274	13	287	6,604
1944	4,206	794	5,000	112,046	258	8	266	6,092
1945	3,818	588	4.406	98.671	274	5	279	6.427

The figures shown above do not include the metallic contents of cadmium and cobalt contained in the ores and concentrates exported overseas.

3. **Platinum and Platinoid Metals.**—(i) *Platinum.* (*a*) *New South Wales.* The deposits at present worked in the State are situated in the Fifield division, near Parkes, and in the Ballina division. The production in 1945 from all divisions amounted to 2 oz. valued at £22. The total production recorded to the end of 1943 amounted to 20,243 oz., valued at £128,996.

(*b*) *Victoria.* In Gippsland the metal has been found in association with copper and 127 oz. were produced in 1913, but there has been no production in recent years.

(*c*) *Queensland.* Platinum, associated with osmiridium, has been found in the beach sands between Southport and Currumbin, in creeks on the Russell gold-field near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

(ii) *Osmium, Iridium, etc.* (*a*) *New South Wales.* Small quantities of osmium, iridium and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River about 15 miles from Oban, on the beach sands of the northern coast, in the gem sands at Bingara, Mudgee, Bathurst and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content. There was no production of these metals during 1945.

(*b*) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(*c*) *Tasmania.* The yield of osmiridium was returned as 109 oz. in 1945, valued at £2,665, compared with the record production in 1925 of 3,305 oz., valued at £103,570. The decrease in later years was largely due to the decline in price from £31 in 1925 to £15 0s. 4d. per oz. in 1938 (although the price rose to £24 19s. 1d. per oz. in 1940 and reached £24 10s. 6d. in 1945), but the depletion of the known alluvial deposits was also a factor.

4. **Other.**—Detailed information in regard to occurrence and production of other metallic minerals in each of the States appears in Official Year Book No. 22, pp. 780–3 and in preceding issues.

§ 9. Coal.

1. **Production in each State.**—An account of the discovery of coal in each State appears in preceding issues of the Official Year Book (see No. 3, pp. 515–6). The quantity and value of the production in each State and in Australia during 1915, 1925, 1935, 1938 and for each of the years 1942 to 1945 are shown in the following table :—

BLACK COAL : PRODUCTION.

Year.	N.S.W.	Victoria.(*a*)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
			QUANTITY.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1915 ..	9,449,008	588,104	1,024,273	..	286,666	64,536	11,412,587
1925 ..	11,396,199	534,246	1,177,173	..	437,461	81,698	13,626,777
1935 ..	8,698,579	476,495	1,051,978	..	537,188	123,714	10,887,954
1938 ..	9,570,930	307,258	1,113,426	..	604,792	83,753	11,680,159
1942 ..	12,236,219	312,854	1,637,148	1,650	581,176	134,442	14,903,489
1943 ..	11,528,893	287,100	1,699,521	..	531,546	145,882	14,192,942
1944 ..	11,102,138	257,692	1,659,675	34,620	558,322	143,641	13,756,088
1945 ..	10,237,886	247,297	1,634,746	41,452	543,363	149,077	12,853,821
			VALUE.(*b*)				
	£	£	£	£	£	£	£
1915 ..	3,424,630	274,770	409,342	..	137,859	30,418	4,277,019
1925 ..	9,302,515	596,117	1,037,956	..	363,203	70,424	11,370,215
1935 ..	4,887,341	282,253	843,034	..	318,013	86,204	6,416,845
1938 ..	5,603,842	188,101	958,884	..	375,083	61,991	7,187,901
1942 ..	9,472,363	411,107	1,698,231	1,650	461,495	108,241	12,153,087
1943 ..	9,290,095	429,358	1,824,591	..	489,721	117,361	12,151,126
1944 ..	9,206,063	407,793	1,785,621	12,117	583,076	122,673	12,117,343
1945 ..	8,694,168	494,690	1,759,311	14,508	572,896	125,719	11,661,292

(*a*) Excludes brown coal, shown in next table. (*b*) At the pit's mouth.

The figures for Victoria already quoted exclude the quantities and values of brown coal which were as follows :—

BROWN COAL : PRODUCTION IN VICTORIA.

Year.	Quantity.	Value.(*a*)	Year.	Quantity.	Value.(*a*)
	Tons.	£		Tons.	£
1915	2,864	573	1942	4,933,861	469,699
1925	876,468	166,404	1943	5,091,729	528,666
1935	2,221,515	317,444	1944	5,016,437	566,444
1938	3,675,450	351,721	1945	5,445,108	641,069

(*a*) Cost of production.

2. **Distribution and Production of Coal in each State.** (i) *New South Wales.*—The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western and are situated at Newcastle, Bulli and Lithgow respectively.

The coal from the various districts differs considerably in quality—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Greta coal seams in the Northern division are being worked extensively between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is the most important coal-mining district in Australia.

The following table shows the yields in each of the three districts during the four years 1942 to 1945 compared with 1938 :—

COAL : PRODUCTION IN DISTRICTS OF NEW SOUTH WALES.

District.	1938.	1942.	1943.	1944.	1945.
	Tons.	Tons.	Tons.	Tons.	Tons.
Northern	6,294,213	8,300,356	7,854,173	7,363,484	6,821,646
Southern	1,831,408	2,303,071	2,175,935	2,040,453	1,791,891
Western	1,445,309	1,632,792	1,498,785	1,698,201	1,624,349
Total	9,570,930	12,236,219	11,528,893	11,102,138	10,237,886
Total Value (*a*) £ ..	5,603,842	9,472,363	9,290,095	9,206,063	8,694,168
Average value per ton (*a*)	11s. 8½d.	15s. 6d.	16s. 1d.	16s. 7d.	17s. 0d.

(*a*) At the pit's mouth.

The production of coal in New South Wales exceeded 10 million tons in each year from 1920 to 1927, the maximum annual production in this period being in 1924, when 11,618,000 tons were produced. Consequent upon the economic depression, production fell to 6,400,000 tons in 1931, but steadily increased each year to 10,051,519 tons in 1937. Production declined by 480,000 tons in 1938 but rose to 11,195,832 tons in 1939. A decrease of 1,646,000 tons in 1940 was followed in the next two years by increased production, the highest output yet recorded, namely 12,236,219 tons being registered in 1942. Production decreased during the next three years by 707,000, 427,000 and 864,000 tons respectively and stood at 10,237,886 tons in 1945. Of the total quantity of coal won in New South Wales since the commencement of operations to the end of 1945, namely, 500 million tons, about 339 million tons or 68 per cent. was obtained in the Northern District, 101 million tons or 20 per cent. in the Southern District, and 60 million tons or 12 per cent. in the Western District.

(ii) *Victoria.* (*a*) *Black Coal.* The deposits of black coal in Victoria occur in three main areas in the southern portion of the State, namely, the Wannon, the Otway and South Gippsland, which total approximately 3,500 square miles. The workable seams are restricted to the South Gippsland area, where the thickness ranges from 2 feet 3 inches to 6 feet. The total quantity of black coal mined in Victoria to the end of 1945 amounted to 20,016,228 tons, valued at £16,356,482.

The output of black coal in Victoria during each of the four years ended 1945 compared with 1938 was as follows :—

BLACK COAL : PRODUCTION IN VICTORIA.

Year.	State Coal-mine.	Other Coal-mines.	Total Production.	Total Value. (*a*)
	Tons.	Tons.	Tons.	£
1938	253,065	54,193	307,258	188,101
1942	270,754	42,100	312,854	411,107
1943	253,359	33,741	287,100	429,358
1944	224,313	33,379	257,692	407,793
1945	213,710	33,587	247,297	494,690

(*a*) At the pit's mouth.

(*b*) *Brown Coal. General.* Victoria is richly endowed, both in quantity and quality, with brown coal deposits. Some account of these deposits and of the operations of the State Electricity Commission in connexion therewith will be found in preceding Official Year Books (*see* No. 22, p. 785). The brown coal produced in Victoria in 1945 amounted to 5,445,108 tons, all but 30,639 tons being procured at the State open cut at Yallourn. During 1945–46 5,534,000 tons of brown coal were produced by the State Electricity Commission, of which 3,525,000 tons went to the power station, 1,923,000 tons to the briquette factory and 86,000 tons to other factories for use as fuel.

Production of Briquettes. The briquetting plant started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 493,000 in 1945–46. Two and a half tons of brown coal are required to make one ton of briquettes.

The table following shows the production and distribution of brown coal, and the production of briquettes in Victoria for the years 1942–43 to 1945–46, compared with 1938–39.

BROWN COAL : PRODUCTION AND UTILIZATION, VICTORIA.

('000 tons.)

Year.	Total Production.	Brown Coal used as fuel.		Brown Coal used as Material in Production of Briquettes.	Production of Briquettes.
		Generating Station.	Briquette Works.		
1938–39	3,643	2,096	516	1,031	400
1942–43	4,978	3,344	545	1,089	415
1943–44	4,829	3,215	538	1,076	417
1944–45	5,249	3,527	574	1,148	431
1945–46	(*a*) 5,534	3,525	641	1,282	493

(*a*) Includes 86,000 tons used by other factories.

(iii) *Queensland.* The distribution of production during 1938 and the years 1942 to 1946 was as follows :—

COAL : PRODUCTION IN QUEENSLAND.

District.	1938.	1942.	1943.	1944.	1945.	1946.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Ipswich	547,901	751,177	755,660	802,269	812,641	823,737
Bowen	224,778	347,381	400,931	316,016	292,043	234,512
Clermont	88,407	142,607	147,179	145,237	177,331	161,777
Maryborough ..	77,162	127,975	136,541	128,606	113,578	103,929
Darling Downs ..	76,571	112,230	115,004	126,950	112,666	107,555
Rockhampton ..	64,174	119,673	107,332	108,043	95,799	82,699
Chillagoe (Mount Mulligan) ..	19,192	17,544	17,533	18,961	19,960	22,193
Mount Morgan ..	13,608	18,561	19,341	13,593	10,728	31,118
Mackay	1,543	..	..	..	..	..
Total ..	1,113,426	1,637,148	1,699,521	1,659,675	1,634,746	1,567,520

The production of 1,699,521 tons in 1943 represents the highest annual production to date.

(iv) *South Australia.* A new field of sub-bituminous coal was opened up at Leigh Creek, South Australia, in 1942 when 1,650 tons, valued at £1,650 were produced. There was no production in 1943, but in 1944, 34,620 tons, valued at £12,117, were produced and 41,452 tons, valued at £14,508, in 1945.

Details of production (which is by open-cut methods) and employment are given in the following table for the years 1942 to 1945.

COAL : PRODUCTION AND EMPLOYMENT IN SOUTH AUSTRALIA.

Year.	Production.	Value.	Numbers Employed.
	Tons.	£	No
1942	1,650	1,650	12
1943	..	..	..
1944	34,620	12,117	91
1945	41,452	14,508	100
Total to 1945 ..	77,722	28,275	

(v) *Western Australia.* Details of the quantity of coal raised on the Collie coal-fields in Western Australia and the men employed are given in the table below for the years 1942 to 1945, compared with 1938.

COAL : PRODUCTION AND EMPLOYMENT IN WESTERN AUSTRALIA.

Year.	Production.	Value.	Men employed.		
			Above ground.	Below ground.	Total
	Tons.	£	No.	No.	No.
1938	604,792	375,083	158	607	765
1942	581,176	461,495	175	647	822
1943	531,546	489,721	188	650	838
1944	558,323	583,076	207	673	880
1945	543,363	572,896	224	636	860

(vi) *Tasmania.* Details of the production of coal in Tasmania and the numbers employed are given in the following table for the years 1942 to 1944, compared with 1938 The chief source of coal supplies in this State is the Cornwall Coal Mine situated on the east coast which produced 83,253 tons in 1945 or 56 per cent. of the State's output.

COAL : PRODUCTION AND EMPLOYMENT IN TASMANIA.

Year.	Production.	Value.	Men employed.
	Tons.	£	No.
1938	83,753	61,991	269
1942	134,442	108,241	243
1943	145,882	117,361	278
1944	143,641	122,673	277
1945	149,077	125,719	270

(vii) *Australia's Coal Reserves.* The latest available estimate of the actual and probable coal reserves of Australia is based upon that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia and issued in a report prepared in 1947. The following table shows the actual and probable coal reserves as determined by that Committee :—

ACTUAL AND PROBABLE COAL RESERVES OF AUSTRALIA.

(Millions of Tons.)

State.	Anthracitic and Bituminous Coals.	Sub-bituminous and Lignitic Coals.
New South Wales	11,668	50
Victoria	33	37,000
Queensland	1,704	67
South Australia	..	650
Western Australia	..	800
Tasmania	244	..
Total	13,649	38,567

3. **Production in Various Countries.**—The total known coal production of the world in 1944 amounted to about 1,710 million tons, towards which Australia contributed about 18.8 million tons, or about 1 per cent. The following tables show the production of the chief British and foreign countries during each of the three years 1943 to 1945 compared with 1938 :—

COAL : PRODUCTION IN BRITISH EMPIRE.

(Thousands of Tons, 2,240 lb.)

Country.	Black Coal.				Brown Coal, Lignite.			
	1938.	1943.	1944.	1945.	1938.	1943.	1944.	1945.
United Kingdom ..	227,015	198.844	191,725	182,255	..	..	..	..
British India	29,052	22,776	23.780	25,999	..	..	..	..
Canada	9,223	14.452	13,968	13,318	3,540	1,488	1,228	1,370
Australia	11.680	14,193	13.756	12.854	3,675	5,092	5,016	5,445
New Zealand	978	1,133	1.063	1.063	1,244	1,653	1,736	1,747
Union of South Africa ..	16,027	19,895	*a* 22,268	*a* 22,729	..	..	..	..
Southern Rhodesia ..	1,027	1.747	1.783	1,641	..	..	..	..

(*a*) Coal sold.

COAL : PRODUCTION IN FOREIGN COUNTRIES.

(Thousands of Tons, 2,240 lb.)

Country.	Black Coal.				Brown Coal, Lignite.			
	1938.	1943.	1944.	1945.	1938.	1943.	1944.	1945.
United States of America	349,684	578,635	607,789	563,001	2,677	2,455	2,281	(*a*)
Germany	183,238	156,067	133,161	40,546	191,899	250,513	227,099	106,040
France	45,770	39,908	24,854	32,836	1,041	1,866	1,311	1,665
Japan	47,915	54,644	48,539	22,009	..	..	..	..
Poland	37,502	*b* 89,646	*b* 86,009	24,795	9	..	..	..
Belgium	29,118	23,366	13,283	15,467	..	..	..	..
Czechoslovakia ..	15,900	24,216	22,859	11,240	15,779	27,145	26,424	15,172
Netherlands	13,275	12,291	8,182	5,006	168	378	236	130
Spain	5,559	9,439	10,319	10,461	163	1,094	1,183	(*c*)
Turkey	2,548	3,117	3,507	3,660	143	414	523	504
Chile	2,011	2,232	2,243	2,019	..	..	..	..
Brazil	871	2,043	1,877	2.043	..	..	..	..
Hungary	1,026	1,346	1,240	685	8,186	10,615	9,918	4,050
Mexico	879	1,037	889	900	..	..	..	..
China	4,600	744	744	614	..	..	..	..
Portugal	303	401	425	425	18	105	125	161
Austria	222	211	191	(*c*)	3,477	3,588	3,616	2,031
Bulgaria	140	(*c*)	(*c*)	(*c*)	1,826	3,755	2,846	3,377
Greece	..	..	..	..	106	366	177	71

(*a*) Included with black coal. (*b*) Includes Silesia, which is not included with Germany. (*c*) Not available.

World production of coal amounted to 1,440 million tons in 1938 rising to 1,750 million tons in 1943 but declining to 1,710 million tons in 1944. Of these quantities those produced in the British Commonwealth totalled 304 million or 21 per cent. in 1938, 286 million or 16 per cent. in 1943 and 281 million tons or 16 per cent. in 1944.

4. **Exports.**—(i) *General.* The quantity of coal of Australian production (excluding bunker coal) exported to other countries in 1946–47 was 44,375 tons, valued at £54,754, from New South Wales. The quantities and values of the oversea exports of Australian coal for the years specified are shown in the following table :—

COAL : OVERSEA EXPORTS, AUSTRALIA.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 ..	2,098,505	1,121,505	1943–44 ..	157,741	182,354
1921–22 ..	1,028,767	1,099,899	1944–45 ..	189,198	223,677
1931–32 ..	344,015	341,800	1945–46 ..	75,883	92,764
1938–39 ..	382,085	347,054	1946–47 ..	44,375	54,754

Australian coal taken for bunker purposes during the same years was as follows :—

COAL : BUNKER, AUSTRALIA.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 ..	1,647,870	1,018,375	1943–44 ..	211,188	371,584
1921–22 ..	1,498,035	2,178,101	1944–45 ..	207,462	382,505
1931–32 ..	506,140	534,897	1945–46 ..	228,977	415,167
1938–39 ..	549,453	561,063	1946–47 ..	355,428	655,207

(ii) *New South Wales.* The distribution of the total output from New South Wales collieries during the years 1942–43 to 1946–47 compared with 1938–39, according to data compiled by the Government Statistician for that State, was as follows.

COAL : DISTRIBUTION OF OUTPUT, NEW SOUTH WALES.

('000 tons.)

Year.	Exports.				Local Consumption.	Total.
	Interstate as—		Overseas as—			
	Cargo.	Bunker.	Cargo.	Bunker.		
1938–39 ..	1,860	411	382	517	5,744	8,914
1942–43 ..	2,793	358	254	256	8,276	11,937
1943–44 ..	2,722	378	158	162	8,139	11,559
1944–45 ..	2,866	340	189	159	7,601	11,155
1945–46 ..	2,499	287	75	173	6,997	10,031
1946–47 ..	2,378	290	44	289	8,185	11,186

5. **Consumption in Australia.**—Details of the average annual production of coal and its distribution in Australia are given in the following table for the five years ended 1938–39 and 1944–45, together with similar details of production and distribution for the year 1945–46.

Under normal circumstances the production and consumption of coal move in the same direction, but in times of short supplies or abnormal consumption consumers may be compelled to rely upon accumulated stocks, and, consequently annual figures may move out of alignment. For this reason the following table has been prepared on a five-yearly basis in order to smooth out any variations from the normal.

COAL : PRODUCTION AND UTILIZATION IN AUSTRALIA.

Black Coal.

Particulars.	Average for Five Years Ended— 1938–39.		1944–45.		Total for Year. 1945–46.	
	'000 Tons.	%	'000 Tons.	%	'000 Tons.	%
Source—						
Production of Saleable Coal *a*	11,169	99.72	13,798	99.97	12,625	99.99
Imports	31	0.28	4	0.03	1	0.01
Total Supplies ...	11,200	100.00	13,802	100.00	12,626	100.00
Disposal—						
Exported overseas—						
Bunker	592	5.29	278	2.01	229	1.81
Other	346	3.09	234	1.70	76	0.60
Total	938	8.38	512	3.71	305	2.41
Consumed as fuel in—						
Electric Light and Power Works	1,796	16.03	2,443	17.70	2,770	21.94
Factories (*b*)	2,067	18.46	2,550	18.48	2,157	17.08
Railway Locomotives (*c*)	2,328	20.78	3,107	22.51	3,053	24.18
Total	6,191	55.27	8,100	58.69	7,980	63.20
Consumed as raw material in—						
Gas works	1,111	9.92	1,557	11.28	1,759	13.93
Coke Works	1,467	13.10	2,233	16.18	1,483	11.75
Total	2,578	23.02	3,790	27,46	3,242	25.68
Balance available for consumption including accumulation of stocks (*d*) ..	1,493	13.33	1,400	10.14	1,099	8.71
Grand Total ..	11,200	100.00	13,802	100.00	12,626	100.00

Brown Coal.

Particulars.	1938–39.		1944–45.		1945–46.	
Production of Brown Coal ..	'000 Tons. 3,064		'000 Tons. 4,849		'000 Tons. 5,534	
Utilization—		%		%		%
As fuel in Electric Light and Power Works ..	1,673	54.60	3,200	65.99	3,525	63.70
As fuel and as a raw material by Briquette Works	1,391	45.40	1,649	34.01	(*e*) 2,009	36.30
Total	3,064	100.00	4,849	100.00	5,534	100.00

(*a*) Estimated. (*b*) Estimated where details were not available. (*c*) Government Railways only. (*d*) Includes bunker coal for interstate and intra-state shipping. (*e*) Includes 86,000 tons used by other factories.

The production of coal is ascertained only in calendar years and to relate it to the other data in the table above it has been necessary to estimate the output of black coal in annual periods ended June. Checks applied from other official sources confirm the reliability of these estimates.

6. **Prices.**—(i) *New South Wales.* The price of New South Wales coal depends on the district from which it is mined. Up to 1933 the Northern district coal generally realized a somewhat higher price than the Southern, but thereafter the average price in the Southern district was in excess of that prevailing in the Northern. According to the figures compiled by the State Statistician the average prices of saleable coal at the pit's mouth for the various districts and for the State as a whole during 1938 and for the years 1942 to 1946 are given in the following table :—

COAL PRICES : NEW SOUTH WALES.

Year.	Northern District.	Southern District.	Western District.	Average for State.
	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*
1938	11 11	14 0	9 6	12 0
1942	15 11	17 9	14 3	16 0
1943	15 11	17 11	14 5	16 1
1944	16 4	18 9	15 1	16 7
1945	16 11	19 2	14 11	17 0
1946	17 1	19 2	15 2	17 1

(ii) *Victoria.* In Victoria the average price of black coal per ton, which is largely determined on the landed cost of New South Wales coal seaborne to Melbourne was : in 1938, 12s. 3d. ; in 1942, 24s. 7d. ; in 1943, 27s. 5d. ; in 1944, 29s. 3d. and in 1945, 37s. 11d. These averages exclude brown coal, which in 1945 cost 2s. 4d. per ton to produce.

(iii) *Queensland.* Prices in the principal coal-producing districts during 1938 and the five years ended 1946 were as follows :—

COAL PRICES : QUEENSLAND.

District.	Value at Pit's Mouth.					
	1938.	1942.	1943.	1944.	1945.	1946.
	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*	Per ton. *s. d.*
Ipswich	17 0	20 5	21 0	21 2	21 3	21 3
Darling Downs ..	19 11	23 2	24 7	24 6	24 9	24 6
Wide Bay and Maryborough	24 0	27 11	28 8	28 9	28 8	29 0
Rockhampton ..	17 0	20 4	20 2	19 9	21 8	19 11
Clermont	13 8	16 4	16 8	16 6	16 5	16 4
Bowen	14 10	19 8	20 7	20 5	20 5	21 2
Chillagoe (Mount Mulligan)	31 6	33 10	34 1	34 1	34 8	35 2
Average for State ..	17 2	20 9	21 6	21 6	21 6	21 7

(iv) *South Australia.* The value of the 1945 production was 7s. per ton, which represents the cost of production.

(v) *Western Australia.* The average prices per ton of the Collie (Western Australia) coal during the four years ended 1946 were : 1943, 18s. 5d. ; 1944, 20s. 6d. ; 1945, 21s. 1d. ; 1946, 22s. 9d. as compared with 12s. 5d. recorded for 1938.

(vi) *Tasmania.* The average prices per ton of coal at the pit's mouth in Tasmania for the four years ended 1946 were : 1943, 16s. 1d. ; 1944, 17s. 0d. ; 1945, 16s. 10d and 1946, 17s. 5d. compared with 14s. 10d. in 1938.

7. **Prices in New South Wales, Great Britain, Canada and the United States of America.**—In the following table the prices of coal in Great Britain, Canada and the United States are compared with that recorded in New South Wales.

AVERAGE PRICES OF COAL PER TON : NEW SOUTH WALES, GREAT BRITAIN, CANADA AND UNITED STATES OF AMERICA.

Country.	1938.	1941.	1942.	1943.	1944.	1945.	1946.	1947.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
New South Wales (*a*) ..	12 0	14 4	16 0	16 1	16 7	17 0	17 1	18 7
Great Britain (*b*) ..	16 8	22 11	24 1	27 3	31 3	35 0	36 10	40 3
	$	$	$	$	$	$	$	$
Canada (*c*) — Bituminous (run of mine) ..	5.417	5.650	5.700	5.700	6.650	6.788	6.980	6.980
United States (*d*)—Bituminous (chestnut) ..	4.327	4.560	4.782	5.045	5.239	5.356	5.775	6.873

(*a*) Average value at the mine per ton of 2,240 lb. ; in Australian currency. (*b*) Average value at the mine per ton of 2,240 lb. ; in sterling. (*c*) In Canadian currency per ton of 2,000 lb. (*d*) In United States currency per ton of 2,000 lb.

8. **Employment in Coal-mines.**—The number of persons employed both above and below ground in coal-mines, in each of the producing States is given for selected years from 1915 and for each of the four years ended 1945 :—

COAL-MINES : PERSONS EMPLOYED.

Year.	New South Wales.	Victoria.		Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
		Black.	Brown.					
	No.	No.	No.	No.	No.	No.	No.	No.
1915	17,959	1,312	(*a*)	2,518	..	498	161	22,448
1925	24,049	1,947	646	2,826	..	677	312	30,457
1935	13,337	1,397	615	2,455	..	689	340	18,833
1938	15,815	1,322	444	2,495	..	765	269	21,110
1942	17,101	1,234	620	2,838	12	822	243	22,870
1943	17,497	1,203	630	2,898	..	838	278	23,344
1944	17,468	1,196	613	2,978	91	880	277	23,503
1945	17,427	1,016	584	2,966	100	860	279	23,232

(*a*) Included with black coal : production prior to 1925 was of little significance.

The maximum number employed was in 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. Since 1933 there has been a gradual increase, but the numbers employed in 1945 were only about three-quarters of the maximum figure already quoted. In New South Wales 3,594,000 tons of coal, or 32.1 per cent. of the total output in 1939, was cut by machinery compared with 5,005,011 tons or 40.9 per cent. in 1942, 4,417,912 tons or 38.3 per cent. in 1943, 4,099,230 tons or 36.9 per cent. in 1944, 3,560,778 tons or 36.7 per cent. in 1945, and 3,818,714 tons or 34.5 per cent. in 1946. Similar details for other States are not available.

9. **Accidents in Coal-mining.**—(i) *Australia.* The following table gives the number of persons killed or injured in 1945, with the proportion per 1,000 employed, and in relation to the quantity of coal raised, a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. Although no precise definition of an accident is available, any disablement from misadventure which rendered the injured unfit for work for fourteen days or more appears to have been uniformly adopted by the State Departments of Mines.

COAL-MINING: EMPLOYMENT AND ACCIDENTS, 1945.

State.	Persons Employed in Coal-mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal raised for each Person—	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	17,427	14	82	0.80	4.71	731,278	124,852
Victoria (*a*) ..	1,600	4	3	2.50	1.88	1,423,101	1,897,468
Queensland ..	2,966	6	221	2.02	74.51	272,458	7,397
South Australia ..	100	..	6	..	60.00	..	6,909
Western Australia ..	860	1	275	1.16	319.77	543,363	1,976
Tasmania ..	279	..	7	..	25.09	..	21,297
Total ..	23,232	25	594	1.08	25.57	514,153	21,639

(*a*) Includes brown coal.

The next table shows for the five-yearly period 1941 to 1945 annual averages respecting the number employed in mining and the number of fatalities, and the rate of fatalities per 1,000 employed.

COAL-MINING: FATALITIES, 1941 TO 1945.

State.	Average No. of Coal-miners Employed.	Average Annual No. of Fatal Accidents.	Rate per 1,000 Employed.
New South Wales	17,369	21.6	1.24
Victoria	1,802	2.4	1.33
Queensland	2,913	3.0	1.03
South Australia	41	..	..
Western Australia	836	1.4	1.67
Tasmania	262	0.4	1.53
Total	23,223	28.8	1.24

(ii) *Other Countries.* According to the report of the Chief Inspector of Mines, the average death rate per 1,000 miners from accidents in coal-mines in Great Britain during the five-yearly period 1933–37 was 1.11, the rates varying between 1.35 in 1934 and 1.02 in 1936, while the rate for Australia for the same period was 1.14. Details are not available for a later comparison.

10. **Commonwealth Board of Inquiry into the Coal-mining Industry.** In January, 1945 a Commonwealth Board of Inquiry consisting of three members was constituted under National Security (Inquiries) Regulations to inquire into and report upon the coal. mining industry of Australia. The terms of reference included, amongst other things, such matters as production of coal, absenteeism, causes of stoppages, health and safety of employees, housing, pension schemes, etc. The Chairman of the Board was the Hon. Mr. Justice Davidson, of the Supreme Court of New South Wales.

On the 4th March, 1946, the instrument appointing the Board of Inquiry was revoked and the Chairman was appointed a sole Commissioner to present a report upon the information, evidence and material already before the former Board. A report in two volumes was presented in March, 1946.

11. **Joint Coal Board.**—In August and September, 1946, a joint Commonwealth and State authority to re-organize and rehabilitate the coal industry of New South Wales was established by law.

§ 10. Coke.

1. **General.**—The production of coke in Australia was limited to about 250,000 tons per annum prior to the 1914–18 War. This was below local requirements and necessitated an annual import of about 27,000 tons from abroad. By 1920, production had risen to more than 500,000 tons and by 1938–39 it exceeded 1,000,000 tons. This increased production permitted an export of 30,000 tons in 1938–39. Imports in the same year were 9,700 tons. In 1945–46 the quantity exported was 5,613 tons, valued £14,572, of which 2,346 tons, valued at £5,286, went to New Caledonia and 1,892 tons, valued at £7,090, to New Zealand.

2. **Production at Coke Works.**—(i) *New South Wales.* The following table shows the production in New South Wales during 1938 and each of the four years 1943 to 1946, as recorded by the Department of Mines :—

COKE : PRODUCTION IN COKE WORKS, NEW SOUTH WALES.

Items.		1938.	1943.	1944.	1945.	1946.
Quantity ..	tons	1,135,446	1,567,172	1,380,158	1,045,049	1,052,303
Value, total ..	£	1,100,266	2,400,993	2,235,700	1,950,032	1,898,094
Value, per ton ..	..	19s. 5d.	£1 10s. 8d.	£1 12s. 5d.	£1 17s. 4d.	£1 16s. 1d.

(ii) *Queensland* A small quantity of coke is made in Queensland, the quantity returned in 1938 being 30,984 tons, of which 27,328 tons were produced at the Bowen State Coke Works. The greater proportion of the output of these works was consigned to the Mount Isa Mines Ltd. and to the Chillagoe State smelters. Hitherto the coke used at these ore-treatment works was imported from New South Wales, but now the local output is sufficient to meet the requirements of the State and leave a small surplus available for export. The following table shows the amount manufactured at the State Coke Works during the four years ended 1945–46, compared with 1938–39.

COKE : PRODUCTION IN STATE COKE WORKS, QUEENSLAND.

Year.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Quantity ..	tons	26,032	18,701	9,347	13,181	11,591

In order to avoid duplication with coal values, the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

3. **Total Production, Australia.**—The production of coke in New South Wales and Queensland referred to above relates to the product of coke ovens only and excludes coke produced at gas works. In the following table, however, particulars of the total production of coke in Australia are shown together with the quantities produced at coke works and gas works respectively.

TOTAL COKE PRODUCTION : AUSTRALIA.

Industry.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
COKE.					
	Tons.	Tons.	Tons.	Tons.	Tons.
Coke Works	1,164,873	1,606,713	1,485,342	1,223,892	986,005
Gas Works	757,046	956,896	992,898	1,032,950	1,027,157
Total	1,921,919	2,563,609	2,478,240	2,256,842	2,013,162
COKE BREEZE.					
Coke Works	78,584	92,658	126,221	102,402	78,466
Gas Works	35,996	40,798	48,873	50,480	53,845
Total	114,580	133,456	175,094	152,882	132,311

§ 11. Other By-Products from Coal.

In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Details of some of these are given in the following table.

OTHER BY-PRODUCTS FROM COAL : AUSTRALIA.

Commodity.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	Gals.	Gals.	Gals.	Gals.	Gals.
Tar—Crude	34,614,313	36,926,518	39,618,296	36,001,178	34,754,021
Refined	3,752,201	10,966,112	10,332,404	11,913,537	13,185,119
Tar Oils (crude)	1,254,396	2,646,314	2,962,100	2,982,844	3,176,381
Ammoniacal Liquor ..	5,387,638	17,802,926	36,894,460	20,908,430	17,153,833
	Tons.	Tons.	Tons.	Tons.	Tons.
Ammonium Sulphate ..	24,251	25,392	24,147	22,095	21,823

§ 12. Shale-oil and Mineral Oil.

1. **Shale-oil.**—(i) *General.* Reference to the deposits of shale and the search for mineral oil in Australia will be found in Official Year Book No. 22, pp. 791–3.

(ii) *New South Wales.* Reference to the establishment of the shale-oil industry in Australia will be found in previous issues of the Official Year Book. In 1937 negotiations were completed between the Commonwealth and New South Wales Governments and the National Oil Proprietary Ltd., by which the latter company undertook to develop the shale-oil industry in the Newnes-Capertee district. The Commonwealth Government agreed to protect the industry by exempting from excise, up to 10 million gallons annually, the Company's output of petrol for a period of 25 years. The successful establishment of this plant will probably lead to an expansion of the industry in Australia and should provide a valuable training ground for technicians. Production of crude oil commenced in 1940 but details are not available for publication. The following table shows the production of oil shale during 1940 to 1946 :—

OIL SHALE : PRODUCTION IN NEW SOUTH WALES.

Year.	Northern District.		Southern District.		Western District.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£	Tons.	£
1940 ..	..	..	..	..	43,805	43,805	43,805	43,805
1941 ..	..	..	820	540	122,758	96,131	123,578	96,671
1942 ..	828	1,881	1,559	1,898	114,937	138,564	117,324	142,343
1943 ..	4,033	6,377	..	..	112,842	153,838	116,875	160,215
1944 ..	3,047	8,827	..	..	134,411	156,458	137,458	165,285
1945 ..	..	..	..	..	123,170	164,648	123,170	164,648
1946 ..	..	..	..	..	121,654	139,902	121,654	139,902

(iii) *Tasmania.* About 38,000 gallons of crude oil were produced in 1934 from shale treated in Tasmania, while the total quantity of oil distilled from shale up to the end of 1934 was set down at 357,000 gallons. The plant owned by the Tasmanite Shale Oil Company has not operated since the end of January, 1935.

Interest in the commercial utilization of oil shales of the Mersey Valley for the extraction of fuel oils has been retarded due to structural and physical conditions for underground mining and the low-grade nature of the shale.

2. **Coal Oil.**—Attention has been directed to the production of oil from coal by a number of processes. A committee appointed by the Commonwealth Government which consisted of nominees of the Commonwealth and State Governments, excepting

Western Australia, and of Imperial Chemical Industries Ltd., was appointed to advise on specific questions submitted to it. In a report submitted in June, 1937, it was stated that the stage had not been reached when Australia could establish plants for the production of oil from coal. The committee recommended, however, that close touch be kept with developments abroad. A report, dated 25th July, 1939, on the production of oil from coal was submitted to the Commonwealth Minister for Supply and Development by the Standing Committee on Liquid Fuels. The recommendations of this Committee followed the lines of those of its predecessors.

3. **Natural Oil.**—(i) *Australia.* Natural oil has been proved to exist in Queensland, Victoria and Western Australia, the best indications being found in Victoria and Queensland. Many of the conditions favourable to the accumulation of oil in commercial quantities have been shown to be present in Queensland, Western Australia and New South Wales. In the latter State, however, no strong positive evidence of its existence has been recorded. Oil has been proved to occur in noteworthy quantities at Lakes Entrance, Victoria, but it still remains to be demonstrated whether the area can be developed on a commercial basis.

Reference is made in § 16 below to the assistance afforded by the Commonwealth Government in the search for petroleum oil.

(ii) *Victoria.* There has been no production of crude petroleum oil since 1940. The total production to the end of that year was 115,283 gallons, valued at £2,769. Two experts who were engaged by the Commonwealth Government to investigate the oil-producing area of Gippsland expressed the opinion that production on a commercial scale could be established and drilling has been continued in this area since 1941 in accordance with their recommendations. Boring for oil in the Nelson area was carried out during the years 1942 to 1945.

(iii) *Queensland.* Great hopes are still entertained in regard to the petroliferous area in Queensland. Gas and light to medium gravity oils have been found at Roma, and gas and oily wax at Longreach. Structural conditions favourable to accumulation on a commercial scale have been located at several places between Injune and Springsure. The search for oil was continued during 1939 by several companies in localities situated at Mount Bassett, near Roma, at Hutton Creek and at Arcadia. Test bores have been drilled in all the localities mentioned, the deepest being that at Arcadia which exceeded 6,000 feet. Showings of petroliferous gas, amounting at Arcadia to 3,000,000 cubic feet a day, and of petroleum have been encountered in all these bore-holes.

(iv) *South Australia.* Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation.

(v) *Western Australia.* Only one company was active in Western Australia during 1939. The company, financially assisted by the Commonwealth and State Governments, commenced deep-drilling operations in the Kimberley district in 1939. No production has been recorded up to the end of 1945.

(vi) *General.* During 1939 efforts were made to secure greater uniformity in State legislation governing the search for oil. A draft Bill based on modern legislation in other countries was prepared by the Commonwealth and submitted to the State Governments. As a result amending legislation was passed in Victoria, Queensland, South Australia and Western Australia. There was immediate response to this in Queensland, where an agreement has been reached between the State Government and one of the major oil companies, whereby the company has undertaken to spend up to £400,000 in the search for oil in that State.

Further details of action taken by the Commonwealth Government in connexion with the search for oil will be found in § 16. "Government Aid to Mining".

§ 13. Other Non-metallic Minerals.

A more or less detailed statement regarding the occurrence and production of other non-metallic minerals is given in preceding issues of the Official Year Book (see No. 22, pp. 793–6). The tables of quantities and values in § 1 of this Chapter show the production of the principal items in this class for each State during 1945.

§ 14. Gems and Gemstones.

1. **Diamonds.**—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1945 in New South Wales was estimated at 73 carats, valued at £107. These were won by fossickers in the Inverell district. The total production to the end of 1945 is given at 206,829 carats, valued at £150,469.

2. **Sapphires.**—The production of sapphires in New South Wales during 1929 was returned as 65 oz., valued at £450, obtained wholly at Sapphire in the Inverell district, and the only output recorded since that year was 1,200 oz., valued at £600, in 1941, 248 oz., valued at £124, in 1943, and 125 oz., valued at £283 in 1945.

In Queensland, gems to the value of £1,382 were purchased on the Anakie sapphire fields in 1945. It is probable that many were sold privately or held for better prices. For these reasons the returns are considered to be very incomplete. There were about 120 miners operating on the fields during 1934 but only 25 at the end of 1945. Production has declined very considerably since 1920, when the yield was valued at £66,000.

3. **Precious Opal.**—The estimated value of the opal won in New South Wales during 1945 was £3,000. This is not regarded as the total output of the State, however, because in many instances miners, buyers and collectors leave the fields before a record of their production or purchases can be secured. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being found in 1911. Three finds of large stone were made in 1928, the gems weighing 790, 590 and 232 carats respectively and showing fine fire and lustre. Occasionally black opals of very fine quality are found, one specimen from the Wallungulla field, weighing 6½ carats, being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since 1890 is estimated at £1,638,976, but, as pointed out above, the figures are to some extent understated.

In Victoria small quantities of precious opal are found in the Beechworth district.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far south as Cunnamulla. The yield in 1944 was estimated at £200, and up to the end of that year at about £188,000. No production was recorded in 1945. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately. The greatest recorded output was for the year 1895 when the yield was valued at £32,750.

Owing to the poor market for gems, production from the Coober Pedy opal field, situated in the Stuart Range in South Australia, fell from £11,050 in 1929 to £1,517 in 1934. The production rose in 1937 to £11,887, but declined to £6,020 in 1939, and rose again to £11,568 in 1941. After a further drop in 1942, to less than £6,000, production has risen to £12,284 in 1945. The field is extremely prolific, a large quantity of precious white opal having been raised therefrom, and only a small portion of the known opal-bearing area has been thoroughly tested. The greatest yield for the State in any one year was obtained in 1920 when the value of production was returned at £24,000.

4. **Other Gems.**—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chiastolite, emeralds, garnets, moonstones, olivines, rubies, topazes, tourmalines, turquoises and zircons. In Western Australia, 609 carats (rough) of emeralds, valued at £278 were produced during 1929 in the Cue district on the Murchison gold-field. The value of the 3,750 carats reported from the same area in 1930 was not ascertainable as there were no sales during the year. There has been no recorded production since 1930.

During the three years 1939, 1940 and 1941, 10 tons of beryl ore, valued at £83 were produced in Western Australia. There was no production in 1942, but since that year 515 tons, valued at £14,564 were produced in 1943, 387 tons, valued at £12,602, in 1944 and 34 tons, valued at £952, in 1945. Beryl is required chiefly for special alloys with copper which are used in the manufacture of castings, non-sparking tools and special diamond-drill bits.

§ 15. Number Engaged, Wages Paid and Accidents in Mining.

1. **Total Employment in Mining.**—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. During 1945 the number so engaged was as follows :—

NUMBER OF PERSONS ENGAGED IN MINING, 1945.

State.	Number of Persons engaged in Mining for—						Total.
	Gold.	Silver, Lead and Zinc.	Copper.	Tin.	Coal.	Other.	
New South Wales ..	509	3,929	145	814	17,427	1,481	24,305
Victoria	643	..	..	4	1,600	194	2,441
Queensland	1,256	34	814	465	2,966	313	5,848
South Australia	16	..	3	..	100	621	740
Western Australia ..	4,818	..	2	13	860	324	6,017
Tasmania	15	445	1,473	736	279	241	3,189
Northern Territory ..	46		5	(a) 48	..	159	258
Australia	7,303	4,408	2,442	2,080	23,232	3,333	42,798

(a) Includes some engaged in mining of tantalite.

Included in the figures for "other" in South Australia were 210 engaged in mining iron ore, 30 gypsum miners, 189 salt gatherers, and 34 opal miners. The Tasmanian figures include 140 scheelite miners and 12 osmiridium miners. Northern Territory figures include 80 wolfram and 75 mica miners.

The following table shows, at intervals since 1911, the number of persons engaged in mining in each State and the proportion so engaged of the total population :—

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION.

State.	1911.		1921.		1931.	
	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population.
New South Wales ..	37,017	2,225	29,701	1,410	30,682	1,200
Victoria	15,986	1,210	5,211	339	6,463	359
Queensland	13,201	2,147	5,847	766	6,753	730
South Australia	6,000	1,457	2,020	406	518	90
Western Australia	16,596	5,787	7,084	2,122	7,147	1,653
Tasmania	5,247	2,760	3,170	1,486	3,397	1,512
Northern Territory ..	715	21,595	131	3,356	145	2,918
Australia	94,762	2,109	53,164	974	55,105	844

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION—*continued.*

State.	1941.		1944.		1945.	
	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population
New South Wales	27,554	987	24,632	859	24,305	839
Victoria	4,839	250	2,690	135	2,441	121
Queensland	6,541	631	5,981	562	5,848	542
South Australia	928	154	906	146	740	118
Western Australia	14,021	2,959	5,930	1,224	6,017	1,228
Tasmania	2,974	1,248	3,439	1,404	3,189	1,287
Northern Territory	424	6,756	259	5,020	258	4,945
Australia	57,281	807	43,837	601	42,798	580

The upward movement in the number of miners engaged which commenced in 1930 reached a peak of 998 per 100,000 of population in 1937 but since that year the ratio has declined as follows :—1938, 957 ; 1939, 945 ; 1940, 880 ; 1941, 807 ; 1942, 696 ; 1943, 636 ; 1944, 601 ; 1945, 580.

2. **Wages Paid in Mining.** -Information regarding rates of wages paid in the mining industry is shown in the Labour Report issued by this Bureau.

3. **Accidents in Mining, 1945.**—The following table gives particulars of the number of men killed or injured in mining accidents during 1945 :—

MINING ACCIDENTS, 1945.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
KILLED.								
Coal	14	4	6	..	1	..	..	25
Copper	..	..	1	..	..	2	..	3
Gold	..	..	..	..	11	..	..	11
Iron	..	..	..	..	..	..	..	..
Silver, lead and zinc	2	..	..	..	..	..	..	2
Tin	..	..	..	..	..	..	..	..
Other minerals	(a) 5	..	..	1	..	..	..	6
Total	21	4	7	1	12	2	..	47

(*a*) Includes quarries.

INJURED.								
Coal	(a) 82	3	221	6	275	7	..	594
Copper	..	..	21	..	..	3	..	24
Gold	7	2	6	..	590	..	..	605
Iron	..	..	..	27	..	..	..	27
Silver, lead and zinc	95	..	..	..	..	9	..	104
Tin	..	..	1	..	..	3	..	
Other minerals	(b) 10	(b) 1	43	13	..	..	..	67
Total	194	6	292	46	865	22	..	1,425

(*a*) Includes shale. (*b*) Includes quarries.

§ 16. Government Aid to Mining.

1. **Commonwealth.**—(i) *General.* Assistance to mining has been given by the Commonwealth under the provisions of the Precious Metals Act 1926, the Gold Bounty Act 1930, the Petroleum Oil Search Acts 1936 (which superseded the Petroleum Prospecting Acts 1926, 1927 and 1928), the Loan Appropriation (Unemployment Relief) Act 1934, the Northern Australia Survey Act 1934 and the Gold Mining Encouragement Act 1940.

Expenditure under the Acts mentioned has been reviewed in previous issues of the Official Year Book. Further expenditure under the Gold Mining Encouragement Act is not contemplated because an entirely new scheme of financial assistance to the mining industry has been arranged. This scheme is described below. Similarly, further expenditure is not contemplated under the Petroleum Oil Search Act 1936, except for two projects not already completed. Apart from these, the Government policy is to conduct geological and geophysical surveys of possible oil-fields (*see* (iii) below).

The Commonwealth Government has recently decided to provide substantial funds both for the immediate rehabilitation of the mining industry and for development of mining projects generally which offer promise of contributing materially to the national development, employment and the economic welfare of the Commonwealth. Applications for financial assistance under the new arrangements are presented to the Mines Department of the State concerned and projects recommended for assistance by the States or Territories are considered by the newly created Bureau of Mineral Resources, Geology and Geophysics. The report and recommendation of the Bureau are considered by the Commonwealth Mining Industry Committee which consists of representatives of the Departments of Supply and Development, the Treasury and Post-war Reconstruction, under the chairmanship of the permanent head of the Department of Supply and Development. The Committee's recommendations are presented for the consideration of the Minister for Supply and Development and the Treasurer.

Recently also an Australian Mining Council has been created, consisting of the Commonwealth and State Ministers whose Departments are concerned with the mining industry. This body deals with problems of national importance and functions in relation to mining in the same way as the Agricultural Council functions in regard to agriculture.

The Bureau has sections dealing with geology and geophysics, mining, engineering, petroleum, technology and mineral economics. The geological section conducts routine surveys in Commonwealth Territories, surveys of possible oil-fields in Australia and New Guinea, surveys of Commonwealth-owned mines and mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations connected with the search for metalliferous radio-active and other mineral deposits ; problems connected with exploration of coal, oil and water ; regional magnetic and gravity surveys ; and engineering and military geophysics.

Diamond Drills. Arrangements are being made by the Department of Supply and Development to import two Sullivan and two Longyear diamond drills for use in connexion with the exploration for, and exploitation of, mineral deposits. These will be capable of drilling to depths of 1,400 and 3,000 feet respectively. The plants will be hired to mining companies and should do much to relieve the shortage of diamond drilling plant in Australia, and under Commonwealth ownership to raise the standard of drilling technique.

Atomic Energy (Control of Materials) Act (34 *of* 1946). This Act provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state (in waste materials from mining operations), and to carry on mining and other operations necessary for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

The Act provides for the notification of discovery of any such substance or mineral containing such substance.

Rewards for Discovery of Uranium Ore. To encourage the search for, and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards.

Rewards will be paid as follows :—

(1) £1,000 for the discovery of a deposit containing sufficient ore to be of economic importance.
(2) £1,000 for the discovery of a deposit capable of producing 25 tons or more of uranium oxide and £2,000 for each 25 tons and pro rata for any excess over 25 tons.
(3) A maximum of £25,000 for any one deposit.

To be eligible for a reward for discovery, the deposit must be more than 15 miles from any other deposit whose existence is known to the Department of Supply and Development.

The Gold Tax Suspension Act (*No.* 58 *of* 1947) suspended the imposition of the tax on gold under the Gold Tax Act of 1939—the latter provided for a tax of 50 per cent. of the amount received when the price of gold was in excess of £9 per oz.

Mica Production. The Commonwealth Government extended to the 31st December, 1948, its authority to acquire the mica produced in Australia at a price fixed by the Prices Commissioner.

Control of Exports of Metals and Minerals.—In order to conserve supplies and to direct surpluses to destinations where most needed, export controls were initiated in 1946. Metals, etc., controlled include copper and copper alloys ; iron, steel and scrap ; all non-ferrous scrap ; zinc dross and dust ; antimony metal and concentrates ; metallic tin, tin concentrates and ores ; and pig lead and scrap and manufactured lead.

(ii) *Survey of North Australia.* Reference to this aerial geological and geophysical survey in which the Commonwealth, Queensland and Western Australian Governments co-operated, and which was completed at the end of 1940 appears in Official Year Book No. 35, page 744. Reports on individual areas are being issued as printing is completed.

(iii) *Search for Oil.* The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea, and considerable sums have been spent during recent years in geological surveys and in drilling operations. Details of efforts made during that period are shown in previous issues of the Official Year Book.

In 1936 the Petroleum Oil Search Act was passed and replaced all previous enactments. A considerable amount of geological work and test drilling was conducted under this scheme, and at the outbreak of the 1939–45 War two tests were partially completed, one at Oiapu in the Gulf district of Papua and one at Nerrima in the Kimberley district of Western Australia. It is proposed to complete these tests.

During the war, in co-operation with the Government of Victoria, an attempt was made to develop the oil sands of the Lakes Entrance district by sinking a vertical shaft and drilling horizontal holes therefrom. This project was continued till 1945 and in 1946 a private company took over the shaft.

A radical change in policy with regard to the search for petroleum throughout Australia and its Territories has also been made. It has been decided that the policy of granting financial assistance to relatively small companies has proved ineffective and that the Commonwealth contribution to the search for oil should take the form of a considerably intensified effort in carrying out geological and geophysical surveys. This work also will be a function of the Bureau of Mineral Resources, Geology and Geophysics working in close co-operation with the Mines Departments of the States. In this connexion co-operative agreements have already been concluded for extensive surveys to be made in the Kimberley and Nort-West Divisions of Western Australia.

The Bureau has also assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them.

(iv) *Mineragraphic Investigations, etc.* In addition to the assistance mentioned above the Commonwealth Government made a grant of £25,000 in 1934 to the Council for Scientific and Industrial Research to stimulate gold production by conducting mineragraphic and ore-dressing investigations as required by the industry. This amount was expended during the succeeding five years in conducting these investigations, which were carried out conjointly with appropriate State institutions, the three laboratory centres being the School of Mines, Kalgoorlie, the School of Mines and Industries, Adelaide, and the University of Melbourne.

The success of the scheme induced a further grant of £22,000. After providing £2,000 for 1940–41, the balance was to be expended at the rate of £4,000 during each of the succeeding five years. The scheme is administered by a Mining Advisory Committee.

(v) *Standing Committee on Liquid Fuels.* The Commonwealth Government has appointed a Standing Committee on Liquid Fuels to co-ordinate knowledge concerning the production of liquid fuels and the use of substitutes therefor, and to furnish information which will enable Australia to obtain greater independence in regard to fuel supplies. This Committee has undertaken the investigation of such matters as the production of oil from coal, benzol, power alcohol, shale-oil, the use of producer and compressed gas in road vehicles, and tar and other substitutes for fuel oil. Seven reports have been issued by this Committee to date.

(vi) *Minerals Committee and Controller of Minerals Production.* During 1941 a Minerals Committee was formed, comprising representatives of the Commonwealth and State Governments and of the mining industry, to advise the Commonwealth on plans necessary to obtain minerals and metals required for war purposes. As a result of recommendations made by the Committee, the National Security (Minerals) Regulations were brought down providing for the appointment of a Controller of Minerals Production whose powers were, broadly, to operate, control and direct the production and supply of minerals. Legislation is now being enacted to provide for the continuation of powers prescribed by the National Security (Minerals) Regulations to enable various projects which were initiated by the Controller of Minerals Production to be continued.

(vii) *Mining Industry Advisory Panel.* The Mining Industry Advisory Panel was set up under the Secondary Industries Commission in 1944 to assist the Commonwealth Government in determining its post-war mining policy. The Panel consists of representatives of the Commonwealth and the States and of the mining industry. The new policy adopted by the Commonwealth with regard to financial assistance to mining has been adopted following recommendations submitted by the Panel through the Secondary Industries Commission. The taxation concessions which have been made to the industry have also resulted from the Panel's recommendations. Investigations are being made into the possibility of arranging uniform legislation in the States and Territories in connexion with health and safety in mines.

2. **States.**—(i) *General.* In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining industry where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

(ii) *New South Wales.* State aid to metalliferous mining during 1945 amounted to £1,791, which was expended mainly in gold and tin mining. During 1946 aid totalled £4,720 of which £2,485 was for tin and £1,593 for gold.

(iii) *Victoria.* In 1946 £7,440 was granted to aid the gold mining industry by the State of Victoria.

(iv) *Queensland.* Mining operations conducted by the State include three coal-mines situated at Bowen, Styx and Mount Mulligan, batteries at Kidston and Bamford, an assay office at Cloncurry, coke-works at Bowen and the State treatment works at Irvinebank. The Chillagoe State Smelters closed down in July, 1943, and arrangements were made for copper ores to be treated at Mount Isa by Mount Isa Mines Limited.

Aid granted to prospectors during 1946 amounted to £14,651 whilst other aid granted by the State Government amounted to £88,158.

(v) *South Australia.* During 1940 the Premier announced that assistance would be given to copper mining in the form of financial help towards such development work as was absolutely necessary for the mine to enter upon reasonably continuous production.

The Commonwealth Government in 1940 made available £1,000 for distribution among gold producers in South Australia. Under the Gold Mining Encouragement Act 1940 provision was made for the refund of the gold tax to bona fide prospectors.

On 5th November, 1942, the Leigh Creek Coal Act was passed to develop the Leigh Creek Coalfield. As a result of extensive drilling operations, development of open-cut mining was commenced in January, 1943. Production from the open-cut to December, 1945 amounted to 77,722 tons.

State aid during 1946 totalled £20,885 of which £9,621 was for coal, £3,005 for copper, £2,614 for gold and the balance of £5,645 for other minerals.

The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Mongolata, Tarcoola and Glenloth, and assays for public purposes are made at the School of Mines.

(vi) *Western Australia.* Under the Mining Development Act of 1902, the following sums were advanced during 1946: £2,561 for gold, £12 for copper and £9,916 for other assistance granted by the State Government.

(vii) *Tasmania.* Assistance to mining under the Aid to Mining Act of 1927 for the development of mines and for prospecting amounted to £409 in 1946. Government drilling operations involved an expenditure in 1946 of £2,027, of which £607 was repaid.

(viii) *Northern Territory.* The Commonwealth Government was responsible for the advancing of considerable sums of money for the development of wolfram and mica fields in Central Australia during the war. Commonwealth activities, with the provision of roads and water supply and the introduction of mechanical mining equipment, have resulted in a great improvement in conditions on the mica fields.

§ 17. Metallic Contents of Ores and Concentrates Produced.

According to returns compiled by the Australian Mines and Metals Association from records supplied by companies associated with mineral production and by State Departments of Mines, the metallic contents (excluding gold) of ores and concentrates produced in Australia during the years 1939 and 1942 to 1946 were as follows :—

METALLIC CONTENTS OF ORES AND CONCENTRATES PRODUCED IN AUSTRALIA.

Metal.		1939.	1942.	1943.	1944.	1945.	1946.
Silver	oz.	15,320,116	14,241,811	10,329,830	9,365,726	8,076,740	9,073,481
Lead, Pig	tons	280,003	263,183	206,376	189,485	164,741	184,314
Zinc	,,	217,256	221,834	182,841	174,358	150,313	192,117
Copper	,,	20,560	20,402	24,326	28,056	24,520	17,755
Tin	,,	3,067	2,931	2,635	2,547	2,282	2,127

The production of pig iron in New South Wales and South Australia, the only producing States, reached its peak in 1941–42 when 1,557,641 tons were produced compared with 1,104,605 tons in 1938–39. Production had declined by 1945–46 to 906,283 tons but rose again in 1946–47 to 1,143,132 tons.

CHAPTER XIX.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **General.**—A detailed account of the various enumerations of live stock in Australia made prior to 1860 is given in previous issues of the Year Book. The numbers recorded between 1800 and 1860 are regarded as somewhat defective. Doubtless the growth of population, the expansion in the area settled and the increase in private ownership made it difficult in those early times to secure accurate returns. Since 1860 however, the annual enumerations have been based, with few exceptions, on actual collections made through the agency of the State Police and reliably record the movement in live stock numbers from year to year.

2. **Live Stock Numbers since 1860.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1930, and from 1939 onwards in single years are given in the following table, and are shown continuously on the graph on page 816.

During the eighty-six years from 1860 to 1946, the live stock of Australia increased considerably, horses, 193 per cent. ; cattle, 251 per cent. ; sheep, 379 per cent. ; and pigs, 306 per cent. The average annual increases which these aggregates represent are as follows :—Horses, 1.26 per cent. ; cattle, 1.47 per cent. ; sheep 1.84 per cent. ; and pigs, 1.64 per cent.

LIVE STOCK : AUSTRALIA.

Year.	Horses.	Cattle.	Sheep.	Pigs.
1860	431,525	3,957,915	20,135,286	351,096
1870	716,772	4,276,326	41,593,612	543,388
1880	1,068,774	7,527,142	62,184,252	815,776
1890	1,521,598	10,299,816	97,881,221	891,138
1900	1,609,654	8,640,225	70,602,995	950,349
1910	2,165,866	11,744,714	98,066,046	1,025,850
1920	2,415,510	13,499,737	81,795,727	764,406
1930	1,792,734	11,720,916	110,568,279	1,071,679
1939	1,724,056	12,861,781	111,057,832	1,155,591
1940	1,698,797	13,080,180	119,305,391	1,455,341
1941	1,665,616	13,255,841	122,694,025	1,797,340
1942	1,611,059	13,560,754	125,189,129	1,477,303
1943 (31st March)	1,517,970	14,005,320	124,614,672	1,563,000
1944 ,, ,, ...	1,449,199	14,183,679	123,173,962	1,746,721
1945 ,, ,, ...	1,359,205	14,133,167	105,370,865	1,630,855
1946 ,, ,, ...	1,265,398	13,878,006	96,396,405	1,425,709
1947 ,, ,, ...	1,195,175	13,426,646	95,722,782	1,273,011

3. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883–4, 1892, 1893, 1895, 1901–2, 1912, 1914, 1918, 1919, 1922–23, 1925–26, 1927–28, 1929–30, 1940–41 and 1944–45 to 1946–47.

The years in which the numbers of live stock attained their maxima are as follows :— Horses, 1918 (2,527,149); cattle, 1921 (14,441,309); sheep, 1942 (125,189,129); and pigs, 1941 (1,797,340).

4. **Live Stock in Relation to Population.**—The number of each kind of live stock per head of the population of Australia has varied since 1860 as shown in the following table :—

LIVE STOCK PER HEAD OF POPULATION : AUSTRALIA.

Year.	Horses	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs
1860 ..	0.38	3.45	17.58	0.31	1940 ..	0.24	1.86	16.97	0.21
1870 ..	0.43	2.60	25.24	0.33	1941 ..	0.23	1.87	17.28	0.25
1880 ..	0.48	3.37	27.87	0.37	1942 ..	0.22	1.89	17.46	0.21
1890 ..	0.48	3.17	31.06	0.28	1943 (*a*) ..	0.21	1.94	17.24	0.22
1900 ..	0.43	2.29	18.75	0.25	1944 (*a*) ..	0.20	1.94	16.83	0.24
1910 ..	0.49	2.65	22.16	0.23	1945 (*a*) ..	0.18	1.92	14.33	0.22
1920 ..	0.44	2.49	15.11	0.14	1946 (*a*) ..	0.17	1.87	12.97	0.19
1930 ..	0.28	1.81	17.07	0.17	1947 (*a*)(*b*)	0.16	1.78	12.70	0.17
1939 ..	0.25	1.87	16.11	0.16					

(*a*) 31st March. (*b*) Subject to revision.

5. **Live Stock in Relation to Area.**—The number of live stock per square mile in the several States and Territories of Australia is given in the following table :—

LIVE STOCK PER SQUARE MILE, 1946.

State or Territory.	Horses.	Cattle.	Sheep.	Pigs
New South Wales	1.31	10.07	142.44	1.40
Victoria	2.65	20.79	166.76	3.09
Queensland	0.55	9.76	28.25	0.62
South Australia	0.31	0.98	17.86	0.32
Western Australia	0.09	0.85	10.01	0.14
Tasmania	0.95	8.25	73.45	1.79
Northern Territory	0.06	1.83	0.04	0.00
Australian Capital Territory	1.12	8.38	239.27	0.66
Australia	0.43	4.67	32.41	0.48

6. **Minor Classes of Live Stock.**—Excluding Victoria, where the details are not available, the number of minor classes of live stock returned for 1941 were as follows :—Goats, 80,366 ; camels, 2,267 ; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and donkeys in Western Australia. In the raising of goats, some attention has been devoted to the angora goat and its product (mohair), and upwards of 5,000 angora goats are included in the number shown above. Of these, 1,640 were in New South Wales, 1,000 in Queensland, 1,531 in South Australia, and 284 in Tasmania. Details for later years were not collected.

7. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1938–39 and 1942–43 to 1945–46 were as follows :—

NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

Product.	Unit of Quantity.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
QUANTITIES.						
Animals (living)—						
Cattle	No.	405	322	93	1,173	284
Horses	,,	2,294	1,110	395	−47	−32
Sheep	,,	66,739	5,107	7,424	2,502	21,117
Bones	Cwt.	21,497	−200	−165	−116	348
Glue-pieces and Sinews ..	,,	−11,145	−10,669	−1,906	583	6
Glycerine	lb.	78,727	−705,483	304	1,498	4,640,683
Hair	,,	−1,003,366	−327,684	−428,624	−348,375	−215,422
Hoofs	Cwt.	(a)	..	..	..	811
Horns	..	(a)	(a)	(a)	(a)	6,998
Meats—						
Frozen Beef (b) ..	lb.	271,948,548	22,621,078	47,446,996	63,147,258	110,791,330
,, Mutton and Lamb	,,	186,487,551	203,681,520	171,569,765	146,794,392	56,574,651
,, Rabbits and Hares	Pair	(a)	(a)	(a)	(a)	1,331,935
,, Other	lb.	19,588,368	15,351,235	28,592,692	55,005,567	15,321,636
Potted, and Extract of ..	,,	(a)	(a)	(a)	(a)	1,067,870
Preserved in Tins, etc. ..	,,	14,778,896	66,736,683	79,607,796	78,555,981	102,571,309
Other (excluding Bacon and Ham)	,,	308,448	2,913,961	664,899	6,309,731	3,317,848
Sausage Casings ..	Cwt.	8,673	14,601	15,107	7,485	5,899
Skins—						
Cattle	No.	(a)	−128,852	61,378	50,435	72,398
Calf	,,	(a)	−4,433	−19,237	−57,532	−229,255
Horse	,,	(a)	3,668	9,944	26,992	27,280
Sheep	,,	(a)	8,254,128	6,861,576	10,704,646	21,387,543
Rabbit	Cwt.	(c) 37,544	54,773	102,944	104,127	131,633
Other (including Undressed Furs) ..	No.	(a)	(a)	(a)	(a)	652,046
Tallow	Cwt.	560,241	99,059	590,676	421,573	146,445
Wool—						
Greasy	lb.	779,781,662	516,775,265	454,308,338	495,893,452	710,964,148
Scoured Tops .. .. Noils .. .. Waste ..	,,	70,299,595	51,666,359	70,273,672	81,665,395	94,459,799

(a) Quantity not available. (b) Includes chilled beef. (c) Includes hare skins

NOTE.—The minus sign (−) signifies net imports.

The values of the net exports for the same five years are furnished in the next table. For the five years ended 1945–46 they amounted to £A.359,284,294, or an average of £A.71,856,859 per annum, of which wool represented 74.14 per cent. Meat, skins and tallow comprise the remaining principal pastoral products exported.

NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

VALUES.(*a*)

Product.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£A.	£A.	£A.	£A.	£A.
Animals (living)—					
Cattle	142	6,193	−2,531	5,492	−26,057
Horses	−11,258	35,089	6,046	−52,588	−139,193
Sheep	39,405	6,269	−1,822	−12,534	9,974
Bones	10,741	−41	−34	−12	485
Glue-pieces and Sinews	−7,796	−9,444	−2,491	202	93
Glycerine	4,004	−48,633	22	94	138,638
Hair	−103,353	−13,007	−64,840	−155,127	−87,178
Hoofs	8,027	..	..	..	577
Horns	18,615	520	822	488	14,183
Meats—					
Frozen Beef (*b*)	4,323,235	560,498	1,246,315	1,663,102	2,833,983
,, Mutton and Lamb ..	4,807,418	5,495,886	4,643,603	3,943,083	1,540,419
,, Rabbits and Hares ..	232,034	12,917	40,664	174,980	145,844
,, Other	417,670	430,587	983,320	1,870,827	451,691
Potted, and Extract of	−32,580	87,407	66,703	98,748	149,690
Preserved in Tins, etc.	492,709	3,018,150	4,088,947	4,212,946	5,876,327
Other (excluding Bacon and Ham) .	6,336	298,502	853,796	758,452	236,381
Sausage Casings..	185,649	268,353	361,956	82,327	114,218
Skins—					
Cattle	639,056	−341,605	64,980	−12,534	−73,673
Calf	129,199	−1,569	−11,939	−38,048	−153,881
Horse	7,143	3,651	10,499	34,119	43,609
Sheep	2,336,718	1,385,480	1,334,847	1,829,977	4,545,203
Rabbit	(*c*) 393,641	1,986,198	4,493,307	3,864,263	6,290,669
Other (including Undressed Furs) .	−287,277	65,715	397,215	423,805	222,676
Tallow	480,459	185,945	903,968	669,548	316,713
Wool—					
Greasy..	36,617,167	37,613,502	36,173,979	38,665,986	56,368,463
Scoured, Tops, etc.	5,277,117	6,623,638	9,532,751	10,641,506	12,863,931
Total Values	55,984,221	57,670,201	65,120,083	68,669,102	91,683,785

(*a*) Australian currency values. (*b*) Includes chilled beef. (*c*) Includes hare skins.

NOTE.—The minus sign (—) signifies net imports.

8. **Value of Pastoral Production.**—(i) *General.* Particulars of the gross, local and net values of pastoral production for each State are shown for 1944–45 and 1945–46 in the following table. Fuller details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXVIII. "Miscellaneous". Maintenance costs have not been computed in all States and depreciation has not been deducted ; consequently the net values are inflated to the extent of these costs.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1944-45 AND 1945-46.

State	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Seed used, and Fodder for Farm Stock.	Value of other materials used in process of Production.	
			1944–45.			
	£	£	£	£	£	£
New South Wales ..	42,730,000	4,033,000	38,697,000	1,000,000	(b) 245,000	37,452,000
Victoria ..	27,409,567	1,952,249	25,457,318	475,000	536,320	24,445,998
Queensland ..	23,343,000	2,170,000	21,173,000	840,000	340,000	19,993,000
South Australia	8,963,991	946,020	8,017,971	83,099	239,394	7,695,478
Western Aust.	7,692,493	716,395	6,976,098	213,754	247,560	6,514,784
Tasmania ..	2,633,060	180,320	2,452,740	92,710	(b) 20,860	2,339,170
Total ..	112,772,111	9,997,904	102,774,127	2,704,563	1,629,134	98,440,430
			1945–46.			
	£	£	£	£	£	£
New South Wales ..	38,956,000	3,530,000	35,426,000	1,114,000	(b) 269,000	34,043,000
Victoria ..	20,753,083	1,404,782	19,348,301	600,000	650,355	18,097,946
Queensland ..	22,124,000	2,060,000	20,064,000	800,000	320,000	18,944,000
South Australia	7,267,322	685,111	6,582,211	141,308	243,110	6,197,793
Western Aust.	7,973,853	683,375	7,290,478	183,565	302,728	6,804,185
Tasmania ..	2,532,740	159,400	2,373,340	118,720	(b) 20,080	2,225,540
Total ..	99,600,998	8,522,668	91,084,330	2,957,593	1,814,273	86,312,464

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils.

(ii) *States* 1936–37 *to* 1945–46. The following table shows the net value of pastoral production by States and the net value per head of population for the years 1936–37 to 1945–46 :—

VALUE OF PASTORAL PRODUCTION.

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
				NET VALUE.(a)			
	£	£	£	£	£	£	£
1936–37	39,300,000	19,502,210	14,112,000	5,217,256	4,597,230	1,692,580	84,421,276
1937–38	33,939,000	18,533,223	15,364,000	4,856,629	4,003,310	1,470,580	78,166,742
1938–39	23,613,000	15,156,276	14,881,000	5,054,784	3,666,461	1,449,590	63,821,111
1939–40	34,562,000	16,434,392	17,693,000	6,206,617	4,689,845	1,802,150	81,388,004
1940–41	35,305,000	18,629,094	17,624,000	6,084,562	4,519,541	1,789,450	83,951,647
1941–42	34,121,000	20,467,898	18,117,000	5,779,743	4,879,433	1,993,050	85,358,124
1942–43	38,212,000	24,766,588	22,011,000	7,132,475	6,683,442	2,208,610	101,014,115
1943–44	42,580,000	26,131,703	21,981,000	7,788,705	7,469,954	2,454,560	108,405,922
1944–45	37,452,000	24,445,998	19,993,000	7,695,478	6,514,784	2,339,170	98,440,430
1945–46	34,043,000	18,097,946	18,944,000	6,197,793	6,804,185	2,225,540	86,312,464

(a) No deduction has been made for depreciation and maintenance.

VALUE OF PASTORAL PRODUCTION—*continued.*

NET VALUE PER HEAD OF MEAN POPULATION.(*a*)

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1936–37	14 13 2	10 10 7	14 6 10	8 17 4	10 3 6	7 5 9	12 8 2
1937–38	12 10 7	9 19 2	15 8 9	8 4 5	8 15 1	6 5 2	11 7 9
1938–39	8 12 9	8 1 8	14 15 7	8 10 1	7 18 5	6 2 4	9 4 3
1939–40	12 10 5	8 13 11	17 6 9	10 7 5	10 0 3	7 10 8	11 12 8
1940–41	12 13 9	9 14 0	17 1 5	10 3 1	9 11 2	7 8 11	11 17 6
1941–42	12 3 8	10 9 7	17 9 2	9 10 5	10 5 3	8 6 3	11 19 4
1942–43	13 10 3	12 11 7	21 2 5	11 12 10	13 18 8	9 3 2	14 0 11
1943–44	14 18 7	13 3 0	20 15 10	12 12 0	15 10 2	10 1 6	14 18 9
1944–45	12 19 11	12 4 0	18 13 5	12 6 3	13 7 4	9 10 0	13 8 6
1945–46	11 13 9	8 19 2	17 8 11	9 15 11	13 16 8	8 18 5	11 12 10

(*a*) No deduction has been made for depreciation and maintenance.

9. **Consumption of Meats.**—Particulars of the quantity of meat per head per annum available for civilian consumption in Australia, Canada, the United Kingdom and the United States are given in the following table. Canned and cured meat has been included at its carcass weight equivalent.

The demand for meat during the war years was such as to necessitate the introduction of rationing in order to divert supplies from civilian consumption to the armed services. Meat rationing was introduced in Australia on 17th January, 1944 covering meat other than bacon and ham, canned meat, sausages and offal, and the rate per week fixed for coupon meat averaged 2¼ lb. for persons nine years and over and 1⅛ lb. for children under nine. On 26th February, 1945, however, the coupon rating was reduced by approximately 8⅓ per cent. averaging 2.1 lb. and 1.05 lb. per week respectively. A further reduction of 12½ per cent. to an average of 1.84 lb. per week for persons nine years and over occurred on the 7th May, 1945. The rate for children under nine remained unaltered at 1.05 lb. per week. The average coupon rate current during 1947 was 1¾ lb. per head per week, the equivalent of 2.43 lb. carcass weight. The rationing of meat in Australia ceased on 21st June, 1948.

QUANTITY OF MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CIVILIAN CONSUMPTION PER HEAD PER ANNUM.

(In terms of Carcass Weight.)

Country.	Average Pre-war.	1941.	1944.	1945.	1946.
	lb.	lb.	lb.	lb.	lb.
Australia	248.1	239.2	212.6	195.8	202.8
Canada	118.4	129.8	149.1	139.7	(*a*)
United Kingdom ..	131.7	102.0	114.9	106.2	112.7
United States of America ..	134.1	151.4	162.1	135.9	(*a*)

(*a*) Not yet available.

10. **Marketing of Meat.**—(i) *General.* The Meat Export Control Act 1935–1946 was introduced following a decision of a conference of Commonwealth and State Ministers with members of the Commonwealth Meat Advisory Committee, held in October, 1935, to set up a Meat Board with defined statutory powers. The Australian Meat Board, which was appointed under the Act in January, 1936, consisted of eighteen members, representative of producers, processors, exporters and the Commonwealth

Government. Provision was made for the appointment from within the Board of an Executive Committee and a Beef Committee. The Act provided for the control of the export of meat by licence. The Board was empowered to regulate shipments of meat and to arrange contracts in respect of freights and insurances; to promote oversea sales by advertising and to foster research into meat problems; and to supervise the issue of export licences. The Board also has power to appoint a London representative. During the 1939–45 War the control of meat exports was under National Security Regulations which ceased to operate with the expiry of the National Security Act on 31st December, 1946. Control then reverted to the Board, which was reconstituted in August, 1946 by legislation amending the Meat Export Control Act. Membership of the reconstituted Board is on an industry basis in lieu of a State basis and the number of members has been reduced from eighteen to twelve. The powers and functions of the Board were *inter alia* extended to enable it to purchase and sell any meat, meat products or edible offal on behalf of the Commonwealth Government and subject to any direction of the Minister for Commerce and Agriculture.

The Meat Export Charges Act 1935–46 provides for the imposition of a levy on all meats exported from Australia, the funds from which are used for the purpose of defraying expenses and charges incurred by the Australian Meat Board in the course of its business. The customary provision is made for exemption from the levy when recommended by the Board.

(ii) *War-time Marketing.* Details of arrangements for the marketing of meat during the 1939–45 War are given on page 1107 of Official Year Book No. 36.

(iii) *Long-term Purchase Agreement.* An agreement was completed between the Government of the United Kingdom and the Commonwealth Government for the long-term purchase of the exportable surplus of Australian meat for the period 1st October, 1944 to the 30th September, 1948.

The agreement covered all classes of meats, including sundries in the fresh, frozen, and canned forms, for the currency of the agreement, with the exception of pigmeats, whose quantities were determined only until the expiry of the second year of the contract, namely 30th September, 1946. Quantities of the latter class of meat for the two succeeding years of the contract were arranged subsequently by negotiation between the two Governments.

Prices were determined for all classes and cuts of meat for the first two years of the contract, which provided that they could be reviewed prior to specified dates at the instigation of either Government in respect of each of the two final years of the agreement.

Subject to certain conditions the Government of the United Kingdom agreed to reimburse the cost of storage and interest incurred by the Commonwealth Government in connexion with the purchase and storage of such meat after it had been in store 28 days.

The arrangement also provides for ample opportunity to be given to the meat industry of Australia to re-engage in the chilled beef trade with the United Kingdom when the shipping position makes that possible.

A further interesting feature is that the Government of the United Kingdom will consult with the Commonwealth Government regarding the steps necessary to ensure a mutually agreeable distribution of Australian meat in the United Kingdom, and also, when the present scheme of control is withdrawn or modified, will confer with the Commonwealth Government as to the ways and means of securing an orderly resumption of private trading.

The prices determined under the long-term purchase arrangement operated until 30th September, 1946, and approximated those which were being paid by the Commonwealth Government under its Meat Purchase Plan. As from 1st October, 1946, rises in prices operated for the new contract year. These rises have been passed on to the producers. Prices for the year ended 30th September, 1948 will remain unchanged, except for some minor adjustments. This contract has now been extended for a further two years to 30th September, 1950. Price changes during the period of this extension may be reviewed under the terms of the contract.

§ 2. Horses.

1. **Suitability of Australia for Horse-breeding.**—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages have been utilized to the fullest extent in breeding all classes of horses. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle variety, compares very favourably with the product of other lands.

2. **Distribution throughout Australia.**—The States of New South Wales, Queensland and Victoria together depasture nearly 80 per cent. of the total number of horses in Australia. In the following table figures are given for each State and Territory during the years 1939 and 1942 to 1947 :—

HORSES : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Total.
1939 . . .	531,355	343,828	444,521	195,834	143,674	30,458	33,191	1,195	1,724,056
1942 . .	525,697	302,401	431,363	171,092	124,402	28,612	26,209	1,283	1,611,059
1943 . .	483,277	292,534	392,639	164,855	112,782	27,077	43,663	1,143	1,517,970
1944 . .	465,672	277,662	387,018	154,102	106,743	26,317	30,534	1,151	1,449,199
1945 . .	436,443	253,782	380,670	133,003	96,528	25,885	31,803	1,091	1,359,205
1946 . .	403,645	232,473	367,357	115,949	88,180	24,863	31,883	1,048	1,265,398
1947 . .	379,774	227,164	343,172	109,274	80,746	23,925	30,019	1,101	1,195,175

The number of horses attained its maximum in Australia during 1918, when a total of 2,527,149 was recorded. The United States of America made its highest recording in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming.

During the years 1941 to 1946 the rate of decline accelerated considerably, averaging 80,000 per annum compared with less than 20,000 for the previous five years. The decline continued in 1946–47.

The number of horses in Australia from 1860 onwards may be obtained from the graph on page 816.

The percentages of the number of horses in the several States and Territories on the total for Australia for 1947 were :—New South Wales, 31.78 ; Victoria, 19.01 ; Queensland, 28.71 ; South Australia, 9.14 ; Western Australia, 6.76 ; Tasmania, 2.00 ; Northern Territory, 2.51 ; and Australian Capital Territory, 0.09 per cent.

The percentages in the various States remained fairly constant during the five years 1941 to 1946, slight increases being recorded for Queensland and Northern Territory.

3. **Oversea Trade in Horses.**—(i) *Exports.* The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914–18 War. Since then, exports have gradually declined and averaged only about 4,000 for the five years ended 1938–39 and 387 for the five years ended 1945–46.

(ii) *Imports.* The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. The average value per head of the horses imported during the five years 1941–42 to 1945–46 was £A.1,085. The average number imported per annum was, however, only 58, and the average annual value, £A.62,885.

Transport difficulties, due to the exigencies of war, affected trade as shown in the table below :—

HORSES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£A.		£A.		£A.
1938–39 ..	238	125,192	2,532	113,934	2,294	−11,258
1941–42 ..	35	33,075	257	49,247	222	16,172
1942–43 ..	5	3,268	1,115	38,356	1,110	35,088
1943–44 ..	26	19,707	421	25,753	395	6,046
1944–45 ..	58	55,249	11	2,661	−47	−52,588
1945–46 ..	165	203,124	133	63,931	−32	−139,193

NOTE.—The minus sign (−) signifies net imports.

§ 3. Cattle.

1. **Purposes for which Raised.**—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, beef-producing cattle are mainly raised in the tropical districts, i.e., in the northern parts of Queensland, in the Northern Territory, and in the Kimberley district in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland occupied the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year the herds were gradually built up, and, despite recurring droughts, they continued to increase until the maximum number of 14,441,309 cattle was attained in 1921. After that year the number dropped continuously till 1929, largely owing to the decline in the oversea demand for frozen beef. With the expansion of dairying it recovered to 14,048,671 in 1934, but from that year declined continuously to 1939 when it stood at 12,861,781. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,183,679) in the latter year being at its highest level since 1935. Drought conditions and other factors during 1944–45 and 1945–46 caused a decline in numbers to 14,133,167 in 1945 and 13,878,006 in 1946. The number recorded in 1947 was 13,426,646. A graph showing the number of cattle in Australia from 1860 appears on page 816.

The numbers of cattle (beef and dairy) in the several States and Territories in 1939 and in each year 1942 to 1947 are as follows :—

CATTLE : NUMBER.

Year.	N.S.W	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus. Cap. Terr.	Total
1939	2,811,884	1,697,295	6,097,089	318,897	767,680	262,407	899,472	7,057	12,861,781
1942	2,878,450	1,986,544	6,303,467	399,143	839,731	253,106	892,881	7,432	13,560,754
1943	3,030,546	2,022,892	6,466,316	424,253	831,231	244,681	978,434	6,967	14,005,320
1944	3,143,378	2,013,033	6,524,553	414,997	870,939	230,127	978,569	8,083	14,183,679
1945	3,144,701	1,903,110	6,623,112	391,323	852,563	224,668	984,370	9,320	14,133,167
1946	3,116,834	1,827,087	6,542,210	374,096	833,567	216,306	960,039	7,867	13,878,006
1947	2,983,093	2,060,061	5,945,285	423,980	811,949	220,119	972,990	9,169	13,426,646

Although the proportion is not as high as it has been in the past, Queensland was carrying 44.28 per cent. of the cattle in Australia in 1947. The percentage in each State and Territory during 1947 was :—New South Wales, 22.22 ; Victoria, 15.34 ; Queensland, 44.28 ; South Australia, 3.16 ; Western Australia, 6.04 ; Tasmania, 1.64 ; Northern Territory, 7.25 ; Australian Capital Territory, 0.07.

A graph showing the distribution of cattle in Australia during 1938–39 is shown in the Official Year Book No. 34, p. 453. A similar graph showing the distribution during 1924–25 is shown in Official Year Book No. 22, p. 660.

3. **Classification of Cattle According to Purpose.**—Of the total number of cattle in Australia in 1947, 8,834,433 or 65.8 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 to 1947 were as follow :—

BEEF CATTLE : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus. Cap. Terr.	Total
1943	1,676,174	577,362	4,892,691	170,657	604,543	101,735	978,434	5,428	9,007,024
1944	1,806,692	607,005	4,978,499	161,894	629,570	101,352	978,569	6,015	9,269,596
1945	1,813,166	538,908	5,113,870	146,215	617,634	96,602	984,370	6,908	9,317,673
1946	1,839,630	527,318	5,099,509	142,795	604,056	90,139	960,039	5,243	9,268,729
1947	1,755,456	648,433	4,613,163	161,913	588,397	87,854	972,990	6,227	8,834,433

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXI. " Farmyard, Dairy and Bee Products ".

4. **Comparison with other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936–40 and at the latest available date. The figures have been compiled by the Food and Agriculture Organization of the United Nations ; for 1945 and 1946 preliminary data have been used extensively, the figures in parentheses being estimates made by the Office of Foreign Agricultural Relations, U.S. Department of Agriculture. Owing to changes in country boundaries, the figures for the two periods do not cover identical areas in all cases.

CATTLE : NUMBER IN VARIOUS COUNTRIES.

Country.	Number of Cattle. ('000 omitted). Average 1936-40.(*a*)	Year.	Number.
India (British and Native)(*b*)	205,863	1945	(200,000)
United States of America	66,684	1946	79,791
Brazil	40,807	1945	(42,000)
U.S.S.R. (Russia)	48,500	1946	(41,500)
Argentina	33,762	1945	34,010
China	(24,000)	1945	(21,000)
Germany	19,881	1945	20,268
France	15,504	1946	14,795
Australia	**13,285**	**1946**	**13,878**
Union of South Africa	11,636	1943	13,068
Colombia	8,010	1946	13,000
Mexico	11,722	1944	(*c*) 12,000
Siam	11,017	(*d*)	(*d*)
Canada	8,246	1946	9,961
United Kingdom	8,798	1945	9,624
Turkey (*b*)	7,177	1944	7,821
Uruguay	8,297	1943	6,256
Italy	7,571	1945	(6,100)
Poland	(9,965)	1945	(5,500)

(*a*) Average for two to four years in some cases. (*b*) Includes buffaloes. (*c*) Unofficial estimate. (*d*) Not available.

The Food and Agriculture Organization of the United Nations has estimated world total cattle numbers at 709.8 millions in 1945 compared with an average of 723.0 millions in the period 1936–40.

5. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been large. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1938–39 and 1941–42 to 1945–46 are as follows :—

CATTLE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£A.		£A.		£A.
1938–39	42	9,431	447	9,573	405	142
1941–42	25	1,313	81	1,275	56	−38
1942–43	14	1,655	336	7,848	322	6,193
1943–44	32	5,893	125	3,362	93	−2,531
1944–45	59	18,646	1,232	24,138	1,173	5,492
1945–46	56	36,167	340	10,110	284	−26,057

NOTE.—The minus sign (−) signifies net imports.

The average value per head of the cattle imported during the last five years was £A342 6s. 8d. while the average value per head of the cattle exported during the same period was £A22 2s. 2d.

6. **Cattle Slaughtered.**—The number of cattle slaughtered during each of the years ended June, 1939 and 1942 to 1946 is shown in the following table :—

CATTLE (INCLUDING CALVES) SLAUGHTERED.

(in thousands.)

Year ended June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Total.
1939	(a)1,136	812	1,284	(b) 160	(b) 127	50	(b) 9	3	3,581
1942	(a)1,041	754	1,105	(b) 154	(b) 111	51	(b) 10	3	3,229
1943	1,061	753	1,064	177	105	53	41	3	3,257
1944	985	767	961	178	105	53	41	2	3,092
1945	982	809	956	171	102	47	41	1	3,109
1946	1,018	584	811	138	120	43	25	2	2,741

(a) Year ended March. (b) Year ended December. previous.

7. **Production of Beef and Veal.**—Details of the production of beef and veal in each State and Territory are given in the following table for the years indicated :—

PRODUCTION OF BEEF AND VEAL (BONE-IN-WEIGHT) : AUSTRALIA.

('000 tons.)

Year ended June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Total.
1939	(a) 172	114	207	(b) 24	(b) 28	11	(b) 2	1	559
1942	(a) 159	112	200	(b) 23	(b) 25	11	(b) 3	1	534
1943	156	105	201	28	22	11	10	1	534
1944	145	100	187	26	20	11	10	1	500
1945	126	99	175	23	18	9	10	1	461
1946	134	76	137	21	24	8	6	1	407

(a) Year ended March. (b) Year ended December previous.

8. **Consumption of Beef and Veal.**—For the three pre-war years 1936–37 to 1938–39 the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat.

In order to cope with the increasing demands by Australian and Allied Services based upon Australia and to supply as much beef as possible to meet the import requirements of the United Kingdom, it was necessary to introduce from January, 1944 a system of rationing limiting civilian consumption which has always been very high. As a result, the quantity of beef and veal entering civilian consumption per head decreased from the pre-war average of 144 lb. to 124 lb. in 1943, 92 lb. in 1944 and 87 lb. in 1945. Consumption increased to 93 lb. per head in 1946.

In the following table details of the production and disposal of beef and veal are given for the period stated.

PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN-WEIGHT): AUSTRALIA.

('000 tons.)

Period.	Changes in Stock.	Production.	Exports.	For Canning.	Consumption by—		Civilian Consumption per head per annum.
					Services.	Civilians.	
							lb.
Average, years 1936–37 to 1938–39	..	569	127	(a)	..	442	144.2
1943	..	517	157	(a)	(a)	360	124.1
1944	+ 11	480	14	81	104	270	92.0
1945	− 2	450	42	88	61	261	86.7
1946	− 7	438	70	53	17	305	93.2

(a) Included with exports.

9. **Exports of Frozen Beef and Veal.**—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantity of frozen beef and veal exported in 1938–39 amounted to 271,963,829 lb., valued at £A4,323,680, but there has since been a decline owing to reduced production and the diversion of supplies to meet the requirements of the Australian and Allied Services based on Australia. The quantities and values of frozen beef and veal exported during 1938–39 and in each year 1941–42 to 1945–46 are shown in the following table :—

EXPORTS OF FROZEN BEEF AND VEAL: AUSTRALIA.

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	lb.	£A.	lb.	£A.
1938–39	259,822,971	4,128,055	12,140,858	195,625
1941–42	116,340,293	2,476,172	916,165	22,244
1942–43	22,419,121	555,285	209,786	5,460
1943–44	46,266,506	1,212,311	1,180,490	34,004
1944–45	61,595,568	1,623,697	1,551,690	39,405
1945–46	106,059,782	2,711,077	4,731,548	122,906

Prior to the war the largest purchaser of Australian beef and veal was the United Kingdom, which during 1938–39 took £3,901,691, or about 90.2 per cent. of the total shipments. Other countries importing Australian beef were, in order of importance, Egypt, Malaya (British), Malta, Philippine Islands and Hong Kong; these countries, together with the United Kingdom, accounted for 98.0 per cent. of the total value of export. However, at the request of the United Kingdom Government there has been a considerable diversion from that country to nearer British possessions during recent years. In 1945–46 shipments to the United Kingdom were valued at £912,210 or 32.2 per cent. of the total value of beef and veal exports, while exports to other British countries, amounted to £1,776,907, equivalent to 62.7 per cent. of the total.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to United Kingdom in a chilled condition. Trial shipments of 254,000 lb. in 1932–33 and 1,515,000 lb. in 1933–34 were made, and the exports in subsequent years increased as follows :—1934–35, 21,570,928 lb., £322,239; 1936–37 41,869,695 lb., £608,175; and 1938–39, 58,963,009 lb., £988,148. However, the advent of war seriously affected the export trade in chilled beef, which decreased as follows :— 1939–40, 12,786,859 lb., £206,353; 1940–41, nil; 1941–42, 1,697 lb., £70; 1942–43, 1,843 lb., £69, and 1943–44 to 1945–46, nil.

10. **Contract for Purchase of Exportable Surplus.** A long-term contract was negotiated between the Governments of the Commonwealth and the United Kingdom for the purchase of Australia's exportable surplus of beef and veal for 4 years ended 30th September, 1948. The contract was later extended for a further two years to 30th September, 1950. Fuller particulars will be found in § 1, par. 10 (iii) *ante*.

§ 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool were, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. **Distribution throughout Australia.**—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing about one half of the sheep of Australia.

A graph showing the distribution of sheep in Australia during 1938–39 is shown in the Official Year Book No. 34, page 452. A similar graph showing the distribution of sheep during 1924–25 was published in Official Year Book No. 22, page 659.

Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph on page 816. Up to 1945 there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945 the sheep flocks have exceeded 100 millions, reaching 125,189,129 in 1942, the greatest number recorded in Australia. At no previous period have such large numbers been depastured continuously, and the development has taken place despite an average annual slaughter of approximately 25 million sheep and lambs for the meat trade.

However, a sharp decline to 105 million occurred in 1945 followed by a further reduction to 96 million in 1946. This represented a loss from all causes other than slaughtering of about 27 million sheep (22 per cent.) since 1944 and was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The number of sheep recorded in 1947 was only slightly below the 1946 figure.

The numbers of sheep in the several States and Territories for 1939 and each year 1942 to 1947 are shown in the following table :—

SHEEP : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
1939	48,876,663	17,007,352	23,158,569	9,936,586	9,177,531	2,625,690	29,901	245,540	111,057,832
1942	56,737,000	20,598,201	25,199,245	10,245,894	9,722,780	2,398,201	25,245	262,563	125,189,129
1943	56,043,598	19,614,040	25,650,231	10,370,565	10,424,385	2,226,906	34,603	250,344	124,614,672
1944	56,837,300	19,220,457	23,255,584	10,359,669	11,012,936	2,187,799	25,575	274,642	123,173,962
1945	46,662,000	16,457,101	21,292,120	8,473,939	10,049,587	2,156,071	29,269	250,778	105,370,865
1946	44,076,000	14,655,277	18,943,762	6,786,538	9,765,983	1,925,604	18,561	224,680	96,396,405
1947	43,105,000	16,598,490	16,084,340	7,958,619	9,787,002	1,933,332	28,005	227,994	95,722,782

Apart from the effect of drought the relative number of sheep depastured in the different States has remained fairly constant.

The percentage distribution in 1947 was :—New South Wales, 45.03 ; Victoria, 17.34 ; Queensland, 16.80 ; South Australia, 8.31 ; Western Australia, 10.23 ; Tasmania, 2.02 ; Northern Territory, 0.03 ; Australian Capital Territory, 0.24 per cent.

3. **Classification of Sheep According to Age, Sex and Breed.**—In the following table sheep numbers in Australia are classified according to age and sex for each of the years 1943 to 1947. Data in this form are not available prior to 1943.

SHEEP : AGE AND SEX, AUSTRALIA.

Description.	1943.	1944.	1945.	1946.	1947.
Rams, 1 year and over ..	1,651,231	1,614,976	1,426,817	1,300,842	1,331,614
Breeding Ewes (including ewes intended for mating)	56,674,075	53,636,301	46,684,632	47,652,092	47,672,089
Other ewes, 1 year and over	9,636,124	11,878,145	11,067,933	6,382,593	5,615,600
Wethers, 1 year and over..	31,985,775	30,614,132	27,751,219	25,002,494	22,486,789
Lambs and hoggets, under 1 year	24,667,467	25,430,408	18,440,264	16,058,384	18,616,690
Total, Sheep and lambs	124,614,672	123,173,962	105,370,865	96,396,405	95,722,782

Particulars relating to the principal breeds of sheep were collected uniformly for all States and the Australian Capital Territory at 31st March, 1947 and are shown in the following table :—

SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1947.

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T. (*a*)	A.C.T.	Australia
Merino	31,067,510	5,265,808	15,872,429	5,926,462	8,323,849	280,313	27,637	196,802	66,960,810
Other pure breeds	2,139,893	1,407,349	23,795	342,187	488,975	456,411	41	8,119	4,866,770
Merino comebacks	2,059,812	3,001,730	89,132	274,068	(*b*)	282,300	155	5,114	(*c*)5,712,311
Crossbreds ..	7,837,785	6,923,603	98,984	1,415,902	974,178	914,308	172	17,959	18,182,891
Total ..	43,105,000	16,598,490	16,084,340	7,958,619	9,787,002	1,933,332	28,005	227,994	95,722,782

(*a*) As at 31st December, 1946. Distribution between categories has been estimated. (*b*) Not available separately. Included with crossbreds. (*c*) Incomplete.

4. **Comparison with other Countries.**—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world.

As with a number of other important sheep-raising countries, it has, however, suffered a considerable reduction in sheep numbers since 1939, but still holds the leading position with 96 million sheep (1946), followed by the U.S.S.R. (Russia) with about 63 million (1943), Argentina with 56 million (1945), India (British and Native) with approximately 48 million (1945) and the United States of America with 44 million (1946). The reduction in sheep numbers since the period 1936–40, according to latest available data, has been pronounced in the south-eastern region of Europe (embracing the pre-war areas of Hungary, Yugoslavia, Greece, Albania, Bulgaria and Rumania) with 35.7 per cent., United Kingdom with 22.8 per cent. the U.S.S.R. (Russia) with 20.4 per cent., Australia with 14.4 per cent., the United States of America with 14.0 per cent. and Union of South Africa, 12.3 per cent. On the other hand significant increases in numbers were recorded in Argentina, India (British and Native) and New Zealand.

The following table shows the number of sheep in Australia in relation to the numbers in some of the principal sheep-raising countries of the world for the years 1936–40 and at the latest available date. The figures have been compiled by the Food and Agriculture Organization of the United Nations; for 1945 and 1946 preliminary data have been used extensively, the figures in parentheses being estimates made by the office of Foreign Agricultural Relations, U.S. Department of Agriculture. Owing to changes in boundaries the figures for the two periods do not cover identical areas in all cases.

SHEEP: NUMBER IN VARIOUS COUNTRIES.

Country.	Number of Sheep ('000 omitted).		
	Average 1936–40.(*a*)	Year.	Number.
Australia	**112,571**	**1946**	**96,396**
U.S.S.R. (Russia)	79,680	1943	(63,400)
Argentina	44,900	1945	56,182
India (British and Native)	43,777	1945	(48,000)
United States of America	51,462	1946	44,241
Union of South Africa	39,899	1945	(35,000)
New Zealand	31,352	1945	33,975
South-east Europe (*b*)	42,000	1945	(27,000)
China	(24,000)	(*c*)	(*c*)
Spain	(19,000)	1945	22,000
Uruguay	17,931	1945	(20,200)
United Kingdom	26,112	1945	20,150
Turkey	16,080	1944	18,800
Morocco	9,976	1945	14,157
Peru	14,900	1942	13,730
Iran	13,813	1945	(12,500)
Brazil	11,436	1944	(10,500)
Iraq	7,090	1945	9,000
Italy	9,356	1945	(7,000)
France	9,648	1946	6,632

(*a*) Average for 2 to 4 years in some cases. (*b*) Total within pre-war boundaries of Hungary, Yugoslavia, Greece, Albania, Bulgaria and Rumania. (*c*) Not available.

5. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively little importance. During the last five years the principal consignments of ordinary sheep have been made to Malaya (British) from Western Australia. On 27th November, 1929, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs. Stud sheep, however, were being exported in increasing numbers up to the outbreak of war in the Pacific, and shipments in 1939–40 amounted to 23,329 sheep valued at £79,955 compared with 525 valued at £11,859 in 1945–46. The chief countries to which stud sheep were consigned in 1939–40 were New Zealand, South Africa, Japan and Korea. The

ordinary flock sheep exported from Australia were, for the most part, consigned to Malaya and the Pacific Islands. The following table shows the imports and exports of stud and flock sheep for the years 1938–39 and 1941–42 to 1945–46 :—

SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£A.		£A.		£A.
1938–39 ..	5,288	44,961	72,027	84,366	66,739	39,405
1941–42 ..	311	4,931	65,061	54,211	64,750	49,280
1942–43 ..	158	2,826	5,265	9,095	5,107	6,269
1943–44 ..	258	12,768	7,682	10,946	7,424	— 1,822
1944–45 ..	616	19,679	3,118	7,145	2,502	— 12,534
1945–46 ..	740	25,522	21,857	35,496	21,117	9,974

NOTE.—The minus sign (—) signifies net imports.

6. **Sheep Slaughtered.**—The numbers of sheep slaughtered in the several States during each of the years ended June, 1939 and 1942 to 1946 were as follows :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED.

(in thousands.)

Year ended June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
1939..	(a) 6,323	7,728	1,121	(b) 2,007	(b) 1,318	377	..	26	18,900
1942..	(a) 8,128	8,635	1,499	(b) 2,071	(b) 1,333	552	(b) 2	38	22,258
1943..	9,279	9,731	2,088	2,297	1,531	603	2	42	25,573
1944..	9,667	9,286	2,228	2,830	1,955	615	2	49	26,632
1945..	8,989	9,161	1,909	3,064	1,607	509	2	53	25,294
1946..	7,229	5,080	1,470	1,453	1,374	433	2	45	17,086

(a) Year ended March. (b) Year ended December previous.

7. **Production of Mutton and Lamb.**—Details of the production of mutton and lamb in each State and Territory are shown below :—

PRODUCTION OF MUTTON AND LAMB.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39	100,666	136,130	20,456	34,052	22,214	6,329	5	440	320,292
1941–42	125,403	151,763	26,227	35,292	23,094	9,274	38	635	371,726
1942–43	153,870	149,235	34,105	38,711	26,519	9,921	38	747	413,146
1943–44	156,901	145,786	36,362	45,933	32,377	10,561	36	788	428,744
1944–45	138.648	143,247	30,724	46,888	25,816	9,200	36	834	395,393
1945–46	122,278	86,615	24,913	25,989	22,170	7,909	36	752	290,662

8. **Consumption of Mutton and Lamb.**—For the three pre-war years 1936–37 to 1938–39 the annual production of mutton and lamb averaged 320,000 tons of which 90,000 tons were exported leaving a balance of 230,000 tons (or the carcass equivalent of 74.9 lb. per head per annum) available for consumption.

During the war the demand for meat by Australian and Allied Services and the desire to maintain, as far as possible, exports to the United Kingdom, necessitated the restriction of local consumption by the introduction, in January, 1944, of a system of rationing.

As the service and export demand was principally for beef this class of meat was in shorter supply to civilians than was mutton or lamb. As a result, the coupon rating for beef fixed under the civilian ration scale was more restrictive, and had the effect of increasing the quantity of mutton and lamb entering civilian consumption to a level approximating that of beef. In 1946, however, mutton and lamb consumption declined to below the pre-war level as a result of heavy shipments overseas and decreased slaughterings. There was a smaller increase in beef and veal consumption.

The consumption of mutton and lamb per head rose from the pre-war average of 74.9 lb. to 91.7 lb. in 1943, to 92 lb. in 1944, to 85.1 lb. in 1945 and declined to 74.1 lb. in 1946. In the following table details of the production and disposal of mutton and lamb are given for the periods stated :—

PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (BONE-IN-WEIGHT) : AUSTRALIA.

('000 tons.)

Period.	Changes in Stock.	Production.	Exports.	For Canning and Dehydration.	Consumption by—		Civilian Consumption per head per annum
					Services.	Civilians.	lb.
Average years 1936–37 to 1938–39	..	320	90	..	..	230	74.9
1943	..	416	150	..	(a)	266	91.7
1944	+ 6	419	77	42	24	270	91.9
1945	− 21	322	34	32	21	256	85.1
1946	+ 2	319	60	9	5	243	74.1

(a) Included with exports.

9. **Exports of Frozen Mutton and Lamb.**—The export trade in mutton and lamb preserved by cold process expanded rapidly to 1913 when 205 million lb. were shipped. Progress was interrupted during the 1914–18 War and, owing probably to high wool prices, the exports of mutton and lamb for a number of years after that war were considerably less than earlier shipments. Exports commenced to rise again in 1929–30 and from that year onwards they continued to expand almost uninterruptedly until 1942–43 in which year 203,681,520 lb., valued at £5,495,886, of mutton and lamb were exported. In earlier years shipments consisted mainly of frozen mutton but in 1923–24 lamb supplanted mutton and the exports of lamb were largely responsible for the increase in total shipments during the ten years to 1942–43. Since that year, due to reduced production as a result of drought conditions and the diversion of supplies to meet the requirements of the Australian and Allied Services based in Australia, there has been a marked decline in mutton and lamb exports, which fell to 56,574,651 lb., valued at £1,540,419, in 1945–46.

The quantities and value of exports of frozen mutton and lamb in 1938–39 and each year 1941–42 to 1945–46 are given in the following table :—

EXPORTS OF FROZEN MUTTON AND LAMB : AUSTRALIA.

Year.	Exports of Frozen Mutton.		Exports of Frozen Lamb.		Exports of Frozen Mutton and Lamb.	
	lb.	£A.	lb.	£A.	lb.	£A.
1938–39 ..	28,155,757	413,693	158,332,714	4,393,773	186,488,471	4,807,466
1941–42 ..	10,638,918	172,712	164,300,962	4,498,081	174,939,880	4,670,793
1942–43 ..	19,441,131	313,328	184,240,389	5,182,558	203,681,520	5,495,886
1943–44 ..	30,010,466	501,668	141,559,299	4,141,935	171,569,765	4,643,603
1944–45 ..	38,021,898	725,214	108,772,494	3,217,869	146,794,392	3,943,083
1945–46 ..	17,527,848	362,057	39,046,803	1,178,362	56,574,651	1,540,419

As with beef, the principal customer in this trade is normally the United Kingdom, which absorbed 91 per cent. of the total quantity exported from Australia during 1943–44. In 1944–45 and 1945–46, there was however, a diversion to nearer British countries and exports of mutton and lamb to the United Kingdom fell to 82.5 per cent. and 77.8 per cent. of the total quantity exported, respectively.

10. **Contract for Purchase of Exportable Surplus.**—A long term contract covering the four years ended 30th September, 1948 was completed between the Governments of the Commonwealth and the United Kingdom for the purchase of Australia's surplus mutton and lamb. The contract was later extended for a further two years to 30th September, 1950. Particulars will be found in § 1, par. 10 (iii) *ante*.

§ 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produces one-quarter of the world's wool and of the total fine-quality merino wool, Australia produces about one-half. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing : the amount so used represented 9 per cent. of the total production in 1945–46 compared with 7 per cent. in 1938–39.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the following table. The data for foreign countries which have been compiled by the Food and Agriculture Organization of the United Nations are generally of a preliminary nature. Figures for U.S.S.R. are rough approximations. Wool production for the Union of South Africa includes wool produced in other British South African Possessions exported through Union ports. Further particulars for the principal countries producing merino, crossbred and carpet wool are included in paragraph 6. "World Wool Production".

SHEEP AND WOOL : PRINCIPAL PRODUCING COUNTRIES.

Country.	Year.	No. of Sheep (in millions).	Wool Production (in millions of lb., greasy).
Australia	**1945–46**	**96.4**	**936**
Argentina	1944–45	56.2	500
United States of America ..	1945–46	44.2	390
New Zealand	1944–45	34.0	373
Union of South Africa ..	1944–45	35.0	234
U.S.S.R. (Russia)	1943–44	63.4	230

2. **Greasy and Scoured Wool.**—Whether the weight of the wool clip should be stated as "in the grease" or as "scoured and washed" is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. There is, moreover, no clearly defined standard in regard to the clean content of wool described as scoured and washed.

A committee of experts in a report to the Central Wool Committee estimated in 1940 that the clean scoured wool content of the total production of Australia averaged between 51 and 53 per cent. of its greasy weight.

Wool scoured in Australia by wool-scouring works, however, yields only about 46 per cent. because the grade of greasy wool treated locally for export as scoured includes a large proportion of dirty and low-grade wool.

The quantity of scoured and washed Australian wool exported during the five years ended 1945–46 was approximately 18 per cent. of the total wool exports regarded as "greasy".

3. **Production.**—The bulk of the Australian wool production is shorn from live sheep; approximately 6 per cent. is obtained by fellmongering and about 5 per cent. is on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table gives the production for the four years 1942–43 to 1945–46 compared with 1938–39. Particulars of the gross value of wool produced in Australia are also shown; for 1938–39 these values are based upon the average price of greasy wool realized at auction in the principal markets of Australia, and for 1942–43 to 1945–46 upon the average appraised value plus certain adjustments as computed by the State Statisticians.

WOOL (AS IN THE GREASE): TOTAL PRODUCTION.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	'000. lb.	'000. lb.	'000. lb.	'000. lb.	'000. lb.
New South Wales ..	437,141	497,538	537,410	448,683	431,549
Victoria	165,829	212,325	196,415	177,143	152,398
Queensland	(*b*)179,459	213,966	194,355	178,719	173,249
South Australia ..	102,888	108,637	115,464	106,708	73,604
Western Australia (*a*) ..	78,802	99,231	105,226	86,841	86,986
Tasmania	17,519	17,256	17,925	16,324	16,338
Northern Territory(*b*) ..	35	308	308	308	155
Australian Capital Territory	1,909	1,905	1,913	1,763	1,960
Total—Quantity ..	983,582	1,151,166	1,169,016	1,016,489	936,239
	£'000.	£'000.	£'000.	£'000.	£'000.
Value (*c*) ..	42,043	73,017	75,124	64,894	58,597

(*a*) For year ended previous December. (*b*) Estimated. (*c*) Subject to revision.

Production for 1946–47 amounted to 976.8 million lb., valued at £96,858,000.

4. **Care Needed in Comparing Clips.**—In comparing successive clips allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven month's growth.

5. **Average Weights of Fleeces Shorn.**—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and the Australian Capital Territory are shown in the following table for the five seasons 1934–35 to 1938–39 and each season 1942–43 to 1945–46 :—

AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.(lb.)

State.	Average 1934–35 to 1938–39. (*a*)	1942–43.	1943–44.	1944–45.	1945–46.
			SHEEP.		
New South Wales	8.87	8.63	9.68	8.35	9.24
Victoria	7.84	8.92	8.29	7.74	7.50
Queensland	7.98	8.46	8.21	8.34	8.62
South Australia	10.06	10.15	10.17	9.66	9.10
Western Australia	8.53	10.21	9.64	8.22	8.56
Tasmania	7.62	7.41	7.41	7.11	6.75
Australian Capital Territory ..	8.32	7.64	7.40	7.10	8.56
Australia (*b*)	8.57	8.86	9.15	8.32	8.72
			LAMBS.		
New South Wales	2.75	2.85	2.99	2.79	2.89
Victoria	2.14	2.48	2.38	2.28	2.19
Queensland	2.89	3.00	2.90	3.45	3.44
South Australia	2.57	3.01	3.02	2.77	2.56
Western Australia	2.57	3.00	3.00	2.75	2.41
Tasmania	1.37	1.68	1.60	1.61	1.47
Australian Capital Territory ..	1.11	1.68	1.51	1.31	1.28
Australia (*b*)	2.57	2.82	2.88	2.71	2.71

(*a*) Mean of average weights in each season. (*b*) Excludes Northern Territory.

6. **World Wool Production.**—The following table shows particulars of wool production in the principal wool producing countries of the world in the period 1934–38 and in each year 1938–39 to 1945–46, distinguishing between merino and crossbred (apparel wool) and carpet wool. The table is based on data compiled by the Imperial Economic Committee and published in the Report and Recommendations of the Wool Conference, held in London between 16th April and 28th May, 1945, but incorporates some minor adjustments made in the light of the subsequent receipt of more authoritative information. In 1945–46, Australia produced 55 per cent. of world total production of merino wool and 30 per cent. of total apparel wool (merino and crossbred). The share of the British Commonwealth in world production in the same year exceeded 72 per cent. of merino wool and 52 per cent. of all apparel wool. Production of carpet wool in Australia is negligible, the principal producer of this class of wool being the U.S.S.R. (Russia), which accounted for 33 per cent. of world production in 1945–46.

WORLD PRODUCTION OF WOOL.

(In millions of lb. actual weight.)

Type of Wool and Country.	Average 1934–38.	1938–39.	1939–40.	1940–41.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Merino—									
Australia	825	808	930	862	864	874	872	720	670
Union of South Africa ..	250	264	271	260	262	247	240	188	195
United States of America	224	232	214	218	228	229	223	213	193
Argentine (*a*) ..	55	54	45	64	62	72	73	68	71
Uruguay	15	15	17	18	15	16	16	19	18
New Zealand	10	7	9	7	7	7	6	7	7
France	8	8	7	6	6	6	5	5	5
Other merino producing countries	51	54	62	57	56	57	60	57	55
Total, Merino ..	1,438	1,442	1,555	1,492	1,500	1,508	1,495	1,277	1,220
Crossbred—									
Argentine (*a*) ..	319	331	330	390	411	439	445	417	437
New Zealand	277	321	293	326	329	324	314	357	346
Australia	177	177	191	215	244	216	260	228	202
United States of America	228	232	214	218	228	229	223	213	193
Uruguay	102	95	117	121	100	104	104	123	119
United Kingdom ..	110	110	111	109	92	91	89	84	84
France	46	46	42	36	37	33	31	29	29
Other crossbred producing countries ..	239	242	245	237	230	232	248	250	250
Total, Crossbred ..	1,498	1,554	1,543	1,652	1,671	1,698	1,714	1,701	1,660
Carpet—									
U.S.S.R. (Russia) ..	181	303	300	330	340	270	230	230	230
China	110	110	90	90	90	90	90	90	90
India	100	100	84	80	80	80	80	80	80
South America ..	30	32	26	26	26	28	30	30	30
Other carpet producing countries	333	321	300	299	281	280	263	263	263
Total, Carpet ..	754	866	800	825	817	748	693	693	693
Grand Total ..	3,690	3,862	3,898	3,969	3,988	3,954	3,902	3,671	3,573

(*a*) Including estimated wool on skins.

7. **War-time Contracts.**—(i) *Wool.* After the outbreak of war in September, 1939. negotiations were concluded between the Governments of the Commonwealth and of the United Kingdom whereby the latter contracted to purchase the entire wool clip of Australia for the duration of the war and one full clip thereafter. The price per lb. at store in Australia was fixed at 10¾d. sterling, or 13.4375d. in Australian currency for the 1939–40 to 1941–42 clips. For the 1942–43 and later clips the United Kingdom Government increased the price by 15 per cent., thus bringing the price to 15.453125d. Australian currency, and provision was made for an equal division between the two Governments of any profits derived from the sale of the wool for use outside the United Kingdom. In addition, an amount not exceeding ⅝d. sterling or ¾d. (Aust.) was paid by the United Kingdom Government to cover all costs from store at port of oversea shipment to ship. The agreement provided that sufficient quantities of wool be retained in Australia for domestic use. The administration of the scheme in Australia was controlled by the Central Wool Committee assisted by a Committee in each State. These Committees consisted of representatives of growers, brokers, buyers and manufacturers Further details may be seen in Official Year Book No. 36, page 1106.

(ii) *Sheepskins.* Under the contract negotiated in April, 1940 between the Governments of the Commonwealth and of the United Kingdom, the latter agreed to purchase, in connexion with the war, the exportable surplus of Australian woolled sheepskins. The scheme was administered by the Central Wool Committee. The exportable surplus was determined by competition in the open market between fellmongers and export packers licensed by the Central Wool Committee. The quantity appraised during each season was as follows :—

SHEEPSKIN APPRAISEMENTS : AUSTRALIA.

Season.	Number of—		Net Weight.	Appraised Values.
	Bales.	Skins.		
	No.	No.	lb.	£
1939–40	16,124	1,604,631	11,012,544	352,592
1940–41	72,643	7,645,280	49,454,306	1,501,557
1941–42	69,274	7,566,080	47,788,050	1,350,558
1942–43	73,701	7,794,507	50,911,840	1,692,955
1943–44	84,001	8,897,735	58,245,326	1,828,923
1944–45	82,296	9,433,549	56,873,508	1,731,483
1945–46	62,302	6,489,199	43,249,892	1,383,710

In accordance with the recommendations made by the representatives of the United Kingdom and Dominion Governments at the London Wool Conference, April–May, 1945, the agreements between the United Kingdom and the Australian and New Zealand Governments for the purchase of sheepskins were terminated at 30th June, 1946.

8. **Australian Wool Realization Commission.**—(i) *General.* The accumulation of Dominion wool in the hands of the United Kingdom Government as an outcome of the war-time arrangements and the disposal of these stocks concurrently with future clips were matters for discussion by a conference of officials and experts from the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand, and the Union of South Africa, held in London in April–May, 1945. Total stocks of United Kingdom-owned wool at 30th June, 1945 were estimated at 3,315,000,000 lb. actual (greasy and scoured) of which 3,245,000,000 lb. were of Dominion origin, the Australian share being 2,060,000,000 lb., or 63 per cent.

This stock approximated two years' consumption and, on reasonably optimistic assumptions the London Conference considered that the complete disposal of the stock in conjunction with current clips would occupy a period of 12 or 13 years. It was decided, therefore, that the only sound method of handling this gigantic task was by means of a partnership between the countries concerned, under which the old wool would be marketed and the marketing of the current clip supported throughout the period of disposal of stocks. A return to the auction system of marketing was favoured, provided it was continued with a floor price scheme to minimize fluctuations which occurred under pre-war auctions. Current clips would thus be offered at auction as in the past and, in addition, selections from stock would be marketed with the aim of maximizing total sales and gradually liquidating stocks. To ensure that stability of wool prices would be achieved, a reserve price appropriate to type and governed by the general trend of prices, and at which the wool would be bought in if commercial bidding did not attain the appropriate level, would be agreed upon.

(ii) *United Kingdom-Dominion Wool Disposals Limited.* The formation, by the four Governments, of a Joint Organization under the title of "United Kingdom-Dominion Wool Disposals Limited" (commonly referred to as "J.O.") was, therefore, undertaken for the purposes of buying, holding, and selling wool on behalf of the United Kingdom and the Dominion Governments concerned. As part of the plan, the organization is required :—

(*a*) to determine total quantities of wool to be offered from time to time concurrently in the Dominions and elsewhere, to be made up of all new clip wool and an appropriate proportion of wool from the organization's stock;
(*b*) to prepare schedules of reserve prices at which the organization will itself be willing to acquire wool;
(*c*) to lift from the market such quantities of new wool as cannot be sold at these reserve prices;
(*d*) to hold and dispose of stocks as the agent of the Governments concerned and, where necessary, to acquire and own stores, plant and equipment for this purpose;
(*e*) to facilitate the sale of wool in every way possible, with a view to stimulating demand.

The stock of Dominion-grown wool in the ownership of the United Kingdom Government at 31st July, 1945, was transferred to the joint ownership of the United Kingdom Government and the Dominion Government concerned, and all wool subsequently acquired under the scheme will be in the joint ownership of the United Kingdom and the Dominion concerned. Total stocks of United Kingdom wool transferred to the Joint Organization at 31st July, 1945, were :—

	Bales.
Australian grown wool	6,796,000
New Zealand grown wool	1,777,000
South African grown wool	1,834,000
	10,407,000

It is the obligation of the Joint Organization to recommend to the Governments the initial level of reserve prices and any major changes which may thereafter be necessary. The structure of reserve selling prices is built upon the basis of "c.i.f. Europe" with a corresponding schedule of reserve prices "ex Store" in the Dominions.

Reserve prices are calculated for the London market as well as Dominion markets and growers are free to forward wool to London for sale there alongside wool from the Joint Organization's stocks. If, at auction, no buyer is forthcoming at the reserve price or higher, the lot is passed in and taken over by the Joint Organization at the auction reserve price, subject to the grower's right of withdrawal.

In order to facilitate and expand the consumption of wool, the Joint Organization will maintain close contact (*a*) with the appropriate bodies interested in furthering the rehabilitation of the wool textile industry in consuming countries, and in securing the replacement and improvement of machinery, (*b*) with the International Wool Secretariat and (*c*) with all institutions concerned with uses of wool and with the reduction of costs of production, processing, manufacture and distribution of wool. The Joint Organization will give attention in general to the removal of any obstacles to consumption.

The Joint Organization has been incorporated in England as a private registered company, the voting shares being held as follows :—four by nominees of the United Kingdom Government, two by nominees of the Government of Australia and one each by nominees of the New Zealand and South African Governments. An active subsidiary has been formed in each Dominion to act on behalf of the Joint Organization in regard to all the operations of the Joint Organization in that Dominion.

The Directors of the principal Company consist of an independent Chairman appointed by the four Governments in agreement, four Directors appointed by the United Kingdom Government, two by the Government of Australia, and one each by the Governments of New Zealand and South Africa. In addition, the Chairman of each of the Dominion Subsidiaries will be *ex officio* Directors of the principal Company without additional voting power.

(iii) *The Dominion Subsidiaries.* The Subsidiary in each of the Dominions is charged with the conducting of the operations of the principal Company in the Dominion in accordance with its policy and decisions. The function of each Subsidiary will be :—

(*a*) to hold wool in the Dominion as the agent of the principal Company ;
(*b*) to sell wool from stocks in the Dominions, and to arrange for the regulation of sales of current clips by auction ;
(*c*) to assess on the basis laid down by the principal Company the appropriate reserve prices for the individual lots of wool (from stocks or current clips) being offered for sale ;
(*d*) to take up wool offered at auction for which the reserve price or better is not offered by a commercial buyer ;
(*e*) to conduct the financial operations of the principal Company in the Dominion ;
(*f*) to furnish to the principal Company annual reports on its activities, including statements of its accounts and information regarding its purchases, sales and stocks.

(iv) *The Financial Plan.* Representatives of the four Governments meet prior to the opening of each wool year and at such other times as may be required, to agree upon the general level of reserve prices in the light of the advice of the Joint Organization.

Under the financial plan, the United Kingdom and the Dominion concerned each take up 50 per cent. of the original capital represented by the opening stock of wool grown in that Dominion to be handed over to the Joint Organization, that opening stock being taken in by the Joint Organization at its original cost, including f.o.b. payments *less* the amounts accumulated in the divisible profits accounts, which amounts, except in the case of South Africa, are estimated fully to cover depreciation of that stock. The balances in the divisible profits accounts are thus used to write down the opening stocks taken in by the Joint Organization. Payment of the Dominions' share of the original capital is to be made in four annual instalments. Towards these instalments are applied the Dominions' shares of the proceeds of sales by the Joint Organization and of the net profit during the interim period 1945–46. Each Dominion and the United Kingdom share equally in the provision of any further capital required by the Joint Organization during the operation of the scheme for payment for bought-in new wool of that Dominion.

Operating expenses are borne equally between the industry and the Joint Organization, the share of the industry being paid by the Dominion Governments primarily from the proceeds of a contributory charge on all sales of new clip wool. The share of the Joint Organization is met by deduction from the proceeds of sales by the Joint Organization before application to capital repayment.

The ultimate balance of profit or loss arising from the transactions of the Joint Organization in the wool of any Dominion will be shared equally between the United Kingdom and the Government of that Dominion.

(v) *The Australian Subsidiary.* Pursuant to the provisions of the Wool Realization Act (No. 49 of 1945) the Australian subsidiary, known as the Australian Wool Realization Commission, was established and commenced operations on 15th November, 1945, the Central Wool Committee having administered the acquisition of the 1945–46 clip to that date. This Commission comprises a Chairman and an Executive Member (the two administrators of the Plan), four growers (two representatives of the Australian Woolgrowers' Council and two representative of the Wool Producers' Federation), one representative of the Federated Storemen and Packers' Union and two other persons chosen for their knowledge of the marketing of wool.

The Act also gives power to the Commission to appoint whatever advisory or technical committees it considers necessary, thus providing a formal basis for full co-operation between the Commission and the various facets of the trade. Accordingly the Commission early in 1946 appointed the following Committees :—

Wool Selling Brokers' Advisory Committee ;
Wool Buyers' Advisory Committee ;
Woollen and Worsted Manufacturers' Advisory Committee.

(vi) *The Contributory Charge.* Associated legislation, viz., the Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 provide for a contributory charge to be imposed on all wool—

(*a*) produced in Australia ; and
(*b*) on or after a date to be fixed by proclamation—
  (i) sold by a broker at auction or otherwise ;
  (ii) purchased by a manufacturer ;
  (iii) subjected by a manufacturer (whether or not he is the producer or owner of the wool) to a process of manufacture ; or
  (iv) exported from Australia ;

the rate of the charge to be such percentage as is prescribed from time to time of the sale value of the wool, the percentage being such as is necessary to provide the amounts required to meet the share of the industry in the operating expenses of the Joint Organization, the payment of interest on monies expended by the Commonwealth in purchases of wool in pursuance of the Disposals Plan and unrecouped, and payment into the Wool Use Promotion Fund as provided under the Wool Use Promotion Act 1945. The plan did not require that the Contributory Charge should operate during the 1945–46 season.

(vii) *Conclusion.* To sum up, the plan, with its associated legislation, amounts to the underwriting of the income of Dominion wool producers during the life of the disposal plan, protecting the growers against the serious fall in prices which would undoubtedly occur if the accumulated stocks were unloaded without control on the market, and it will prevent also undue price fluctuations during individual years and between one year and the next. In other words, it endeavours to guarantee the stability and solvency of the whole wool industry.

(viii) *Review of the Operations during* 1945–46 *Season.* The disposals plan provided that, for the wool year 1945–46, the method of purchase which had operated during the previous six years, namely appraisement and acquisition, should be continued and that the United Kingdom Government would be responsible for financing the purchase of all the wool so acquired, the management and sale of the 1945–46 clip being entrusted to the Joint Organization. Until the 16th November, 1945, the Central Wool Committee conducted appraisements as in previous seasons, and then, with the same organization, the Australian Wool Realization Commission completed the appraisements for the remainder of the season. The total weight and value of wool appraised for the 1945–46 season are shown in the following table in comparison with similar figures for the previous six years.

WOOL APPRAISEMENTS : AUSTRALIA.

Year ended June—	Quantity of Wool Appraised.			Value of Wool.		Average Value per lb Greasy.	
	Greasy.	Scoured.	Total.	Total Appraised.	Total Return to Grower.	Appraised.	Total Return to Grower.(*a*)
	'000 lb.	'000 lb.	'000 lb.	£	£	*d.*	*d.*
1940(*b*)	1,066,237	45,829	1,112,066	59,841,898	64,722,636	12.405	13.438
1941	990,833	53,206	1,044,039	55,251,133	60,959,828	12.085	13.438
1942	1,034,617	55,853	1,090,470	57,958,392	63,126,096	12.259	13.438
1943	1,048,049	51,369	1,099,418	66,651,256	73,525,280	13.898	15.453
1944	1,044,228	54,021	1,098,249	66,850,270	73,701,759	13.925	15.453
1945	883,767	47,315	931,082	56,075,091	62,520,983	13.755	15.453
1946	823,335	43,612	866,947	51,479,647	58,183,617	13.569	15.453

(*a*) Overall flat rate price paid by the United Kingdom Government. (*b*) Period September, 1939–June, 1940.

The average weight of wool per bale for the 1945–46 season was 302 lb., compared with 298 lb. per bale for the 1944–45 season, and 304 lb. per bale for the 1943–44 season.

As was recommended by the London Wool Conference 1945, the purchase price paid by the United Kingdom Government for the Australian clip (15.4531d. per lb. Australian currency) for the 1944–45 season was maintained for the 1945–46 season.

It was agreed in communications with the United Kingdom and Commonwealth Governments that the selling prices for all sales of wool as from the 1st November, 1945, would be the United Kingdom Export Issue prices which were in force at that date.

With the accumulated stocks in Australia taken over at 31st July, 1945 by the Joint Organization and the 1945–46 clip of 2,865,717 bales, a total of 7,829,485 bales were available in Australia for supply to consumers during the 1945–46 season. In accordance with the announcement made by the Joint Organization on the 24th June, 1946, that the sale of wool at fixed prices by or on behalf of the Joint Organization would cease on 30th June, 1946, no sales were booked in Australia after the 30th June, 1946. However, the volume of sales rapidly accelerated towards the end of the year and during June, 1946, sales from wool within Australia totalled approximately 1,300,000 bales. The accounting period, however, for the 1945–46 season was from the 1st August, 1945 to the 31st July, 1946, and during this period estimated total sales amounted to 4,892,049 bales including 1,209,937 bales unshipped at 31st July, 1946.

(ix) *Stocks.* (*a*) *Total held by Joint Organization.* By the 30th June, 1946, the stocks of wool originally taken over by the Joint Organization from the United Kingdom Government on 1st August, 1945, totalling 10,407,000 bales, were reduced to 5,786,500 bales, particulars being as follows :—

WOOL STOCKS HELD BY UNITED KINGDOM-DOMINION WOOL DISPOSALS LTD., 30th JUNE, 1946.

(Bales.)

Origin and Location of Stocks.	Type of Wool.				Total.
	Merino.	Cross-bred.	Slipe.	Karakul	
Australian grown wool—					
In Australia	2,155,600	651,500	..	..	2,807,100
In United Kingdom	776,200	205,900	..	..	982,100
New Zealand grown wool—					
In New Zealand	..	796,500	139,300	..	935,800
In United Kingdom	..	390,300	99,000	..	489,300
South African grown wool—					
In South Africa	259,300	..	..	80,600	339,900
In United Kingdom	232,300	..	..	..	232,300
Total	3,423,400	2,044,200	238,300	80,600	5,786,500

(*b*) *Total held in Australia.* In the next table details are shown of the stocks of wool held in Australia by the Central Wool Committee and its successor, the Australian Wool Realization Commission, on the dates specified. The quantities, which distinguish between greasy, scoured and carbonized, refer to the amount of appraised wool actually held in store in Australia. Wool held by brokers prior to appraisement and any held by woollen mills or growers is not included.

STOCKS OF APPRAISED WOOL HELD IN STORE IN AUSTRALIA.

(Source : Australian Wool Realization Commission.)

31st July—	Greasy.	Scoured.	Carbonized.
	'000 lb.	'000 lb.	'000 lb.
1940	127,134	13,640	2,017
1941	376,444	82,329	8,781
1942	397,051	75,896	6,296
1943	758,288	125,555	12,271
1944	1,141,777	155,534	13,512
1945	1,321,387	176,295	13,325
1946	1,072,771	164,021	8,712
1947 (*a*)	675,110	104,710	3,199

(*a*) 30th June.

9. **Wool Publicity and Research.**—Under the Wool Use Promotion Act of 1945, provision was made for improving the production and increasing the use of wool by the appointment of a Commonwealth Wool Adviser, the re-constitution of the Australian Wool Board, and the establishment of a Wool Consultative Council to advise the Ministers in regard to the aspects of Australian wool industry with which they are associated. The Australian Wool Board consists of three representatives of the Australian Wool Growers' Council and three from the Australian Wool Producers' Federation. The Wool Consultative Council consists of the Wool Adviser and seven members appointed by the Minister to represent the various branches of the industry.

Funds are provided by the Wool Tax Equivalent from the Wool (Contributory Charge) Act supplemented by an equivalent contribution from Treasury funds—in all about £600,000 per annum. Of this sum an amount will be paid to the Wool Research Trust Account for scientific, economic and cost research while the balance is to be applied by the Wool Board for promotion and publicity.

The Council for Scientific and Industrial Research is responsible for scientific, biological and technical research while the economic aspects of the industry will be the responsibility of the Commonwealth Department of Commerce and Agriculture. Provision is made for co-operation with State Departments of Agriculture and other organizations.

10. **Consumption of Locally Processed Wool.**—Particulars of the total consumption of wool in Australia are not available as quantities of manufactured woollen goods are imported whose contents in terms of wool cannot be ascertained. It is possible, however, to secure with reasonable accuracy the quantities of wool used in Australian factories and mills to produce woollen cloth and other woollen goods, such as blankets, rugs and knitted wear. Some difficulties arise in the aggregation of returns from individual mills concerned with only one process in manufacture and whose output constitutes the raw material of other mills, but the risk of duplication has been reduced to a minimum. Reference is made to the woollen mills established in Australia in Chapter XXIV. "Manufacturing Industry".

The factors used to convert scoured wool and woollen yarn processed in Australia into their greasy equivalent are now computed from the data furnished by woollen mills. In 1945–46 these factors were :—1 lb. of worsted yarn was taken to equal 2.10 lb. of greasy while the greasy equivalent of 1 lb. of scoured wool was 1.71 lb.

In the following table particulars are given of the quantity of wool processed in Australian woollen mills, cotton mills, hosiery mills and other factories during the years 1938–39 and 1941–42 to 1945–46 :—

CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.

(In terms of greasy.)

Year.	Woollen Mills.	Cotton Mills.	Hosiery Mills.	Other Factories.	Total
	lb.	lb.	lb.	lb.	lb.
1938–39	52,375,530	533,335	13,327,245	2,208,201	68,444,311
1941–42	88,353,493	592,592	26,300,261	8,236,440	123,482,786
1942–43	87,431,811	2,091,199	24,453,022	7,771,278	121,747,310
1943–44	81,398,278	1,199,683	22,421,814	9,786,325	114,806,100
1944–45	70,120,466	1,137,644	20,947,593	9,652,693	101,858,396
1945–46	62,126,366	355,180	15,012,495	9,416,989	86,911,030

11. **Exports of Wool.**—(i) *Greasy—Quantities.* Prior to the 1939–45 War, greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938–39, 41.9 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20.4 per cent., Belgium, 13.1 per cent., and Japan, 9.1 per cent. During the war, exports to the United Kingdom declined and shipments to the European continent and to Japan virtually ceased, while the quantity shipped to the United States of America showed great expansion. Of the total quantity of greasy wool exported overseas during the five years ended 1945–46, 55.0 per cent. was sent to the United States of America and 36.2 per cent. to the United Kingdom. Shipments to European continental countries were resumed on a restricted scale in 1945–46. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

EXPORTS OF WOOL IN THE GREASE : AUSTRALIA.

Country to which Exported.	Average, Five Years 1909–13.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	lb.	lb.	lb.	lb.	lb.	lb.
United Kingdom ..	212,004,088	333,263,937	173,255,776	195,986,984	252,090,362	237,312,014
Other British Countries	(a)	2,861,227	13,989,494	12,384,738	6,891,608	7,804,205
Belgium	55,143,706	104,147,161	..	..	..	68,691,768
France	149,835,946	162,034,076	..	..	..	89,579,783
Germany	106,344,696	35,027,760	..	..	..	..
Italy	4,381,197	21,186,890	..	..	..	5,408,689
Japan	7,262,683	72,659,411	..	..	..	..
Netherlands	(a)	15,701,733	..	..	..	..
Poland	(a)	6,954,917	..	..	..	..
United States of America	15,486,447	21,484,584	328,200,808	243,840,900	230,193,247	288,967,208
Other Foreign Countries	6,382,577	20,406,016	2,681,473	2,902,791	7,541,805	13,594,473
Total	556,841,340	795,727,712	518,127,551	455,115,413	496,717,082	711,358,140

(a) Included with Other Foreign Countries.

(ii) *Scoured and Washed and Carbonized including Tops, Noils and Waste—Quantities.* The exports of "scoured and washed" wool, whether carbonized or not, including tops, noils and waste during the periods shown were as follows :—

EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED INCLUDING TOPS, NOILS AND WASTE : AUSTRALIA.

Country to which Exported.	Average, Five Years 1909–13.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	lb.	lb.	lb.	lb.	lb.	lb.
United Kingdom ..	32,032,577	36,591,488	11,980,449	24,746,603	29,250,478	22,907,495
Canada	(a)	4,470,367	4,884,467	7,913,794	8,567,011	9,602,450
Other British Countries	(a)	1,156,535	6,096,509	8,732,929	7,092,741	8,318,004
Belgium	7,528,058	5,802,183	..	..	..	6,967,868
France	16,068,910	9,960,450	..	..	..	1,598,747
Germany	12,310,967	1,935,088	..	..	..	..
Italy	265,442	67,051	..	..	..	151,994
Japan	1,888,161	1,618,827	..	..	..	..
Poland	(a)	497,285	..	..	..	..
United States of America	66,156	765,176	25,030,646	24,358,883	30,146,954	32,086,198
Other Foreign Countries	186,839	8,080,714	3,677,088	4,543,162	6,608,211	12,883,931
Total	70,347,110	70,945,164	51,669,159	70,295,371	81,665,395	94,516,687

(a) Included with Other Foreign Countries.

(iii) *Total Value of Exports.* The value of wool exported from Australia during the five years ended 1945–46 averaged 34.8 per cent. of the value of the exports of merchandise of local origin, and during 1945–46 the proportion was 36.0 per cent. The value during the period under review together with the principal countries to which wool was exported is shown in the following table :—

VALUE OF WOOL EXPORTS : AUSTRALIA.

Country to which Exported.	Average, Five Years 1909–13.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£A.	£A.	£A.	£A.	£A.	£A.
United Kingdom ..	10,608,967	18,513,175	13,593,272	18,475,758	22,982,119	21,523,356
Other British Countries	(a)	675,143	2,898,651	3,956,730	3,218,303	3,726,087
Belgium	2,546,915	4,720,537	..	..	..	6,120,959
France	6,494,832	7,566,458	..	..	..	7,305,245
Germany	5,131,282	1,994,320	..	..	..	..
Italy	202,434	1,175,304	..	..	..	445,439
Japan	516,528	3,804,120	..	..	..	..
Netherlands	(a)	826,198	..	..	..	34,080
Poland	(a)	403,446	..	..	..	..
United States of America	795,328	1,346,187	27,141,701	22,281,578	21,453,319	26,948,889
Other Foreign Countries	296,356	1,712,208	684,564	1,053,352	1,732,870	3,155,742
Total	26,592,642	42,737,096	44,318,188	45,767,418	49,386,611	69,260,397

(a) Included with Other Foreign Countries.

12. **Local Sales of Wool.**—Approximately 90 per cent. of Australian wool is normally disposed of locally. Under pre-war conditions buyers from the United Kingdom, France, Belgium, Germany and other European countries, and from America, Japan, China and India attended the sales conducted in Sydney, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart and Launceston. Auction sales were resumed in 1946–47 following the cessation of the acquisition scheme which ended with the 1945–46 season.

13. **Value.**—Wool is the chief factor in the pastoral wealth of Australia, and the nation's prosperity is largely dependent upon the satisfactory sale of the clip. During the ten years ended 1938–39 the price of greasy wool sold in the selling centres of Australia averaged 11½d. per lb. compared with 13.94d. per lb. for the ten years ended 1945–46. The average for the nine post-war years ended 1928–29 was 18d. per lb., and for the seven pre-war years ended 1913–14 9d. per lb. The heavy decline in the price of wool which commenced in 1929–30 continued during the next three years. In 1933–34, prices rose in a remarkable manner, averaging 15.84d. per lb., compared with 8.72d. per lb., for the previous year, an increase of 81.6 per cent. A decline in 1934–35 was succeeded by a period of rising prices in the two years following, but in 1937–38 and in 1938–39 prices again receded.

As mentioned in paragraph 7 above, the price of wool during the 1939–45 War was determined by the British Government wool contract. The price fixed for the years 1939–40 to 1941–42 was 13.4375d. per lb., and for the years 1942–43 to 1945–46, 15.45d. per lb. With the return to auction sales in 1946–47, the average price of greasy wool sold reached the record figure of 24.49d. per lb.

The effect of fluctuating wool values upon the national income is reflected in the following figures. Based upon appraisement in each State plus certain adjustments as recorded by the State Statisticians, the gross value of the wool clip for Australia for 1942–43 amounted to £73,017,000 and for 1943–44 to £75,124,000 compared with £42,043,000 realized during 1938–39 under open market conditions. The value of the 1944–45 and 1945–46 clips declined to £64,894,000 and £58,597,000 respectively, as a result of decreased production. In 1924–25, when the record price was realized, the value was £81,430,000, and in the year 1930–31, £34,804,000.

The following table shows the average price per lb. of greasy wool in Australian currency determined by the British Government wool contract for the years 1941–42 to 1945–46 compared with the average auction-room price of greasy wool in Australia for 1938–39 as compiled by the National Council of Wool-selling Brokers. This latter price represents the average price realized for all greasy wool of whatever type or quality marketed during the year indicated.

WOOL: AVERAGE MARKET PRICE PER LB.

Description.	1938–39.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
Greasy ..	(*a*) 10.39	(*b*) 13.44	(*c*) 15.45	(*c*) 15.45	(*c*) 15.45	(*c*) 15.45	(*a*) 24.49

(*a*) National Council of Wool-selling Brokers. (*b*) The equivalent of the contract price of 10¾d. sterling. (*c*) The equivalent of the contract price of 12.34d. sterling.

Measured in terms of Australian, sterling, and gold currencies the approximate values of greasy wool per lb. since 1936–37 were as follows :—

GREASY WOOL : AVERAGE VALUES PER LB.

Year.	Australian Currency.	Sterling.	Gold Prices.
	d.	*d.*	*d.*
1936–37	16.48	13.16	8.03
1937–38	12.51	9.99	6.15
1938–39	10.39	8.30	4.84
1939–40	13.44	10.75	5.37
1940–41	13.44	10.75	5.34
1941–42	13.44	10.75	5.34
1942–43	15.45	12.34	6.28
1943–44	15.45	12.34	6.28
1944–45	15.45	12.34	6.20
1945–46	15.45	12.34	6.10

The average values shown in sterling and gold currencies have been calculated by converting the average prices shown in Australian currency on the basis of the average rates of exchange and the average gold prices between the months of September and June in each year. Though not exact these results will suffice for general purposes.

14. **United Kingdom Importation of Wool.**—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country during 1938 and each year 1943 to 1946 from the principal wool-producing countries.

WOOL (*a*) : IMPORTS INTO UNITED KINGDOM.

Country of Origin.	1938.	1943.	1944.	1945.	1946.
	’000 lb.	’000 lb.	’000 lb.	’000 lb.	’000 lb.
Australia	365,519	101,262	292,656	350,470	229,668
New Zealand	197,995	97,972	157,618	64,894	185,645
Union of South Africa ..	106,601	50,508	31,162	66,267	38,970
India	46,049	6,751	18,619	15,816	10,798
Falkland Islands ..	1,426	5,578	4,697	3,595	2,813
Eire	8,277	3,555	3,735	3,456	1,638
Other British Possessions ..	4,566	11	7	12	421
United States of America ..	(*b*)	2,394	..	(*b*)	(*b*)
Argentina	79,303	1,221	1	..	4,034
Uruguay	22,073	261	..	..	989
Other Foreign Countries ..	49,517	..	1	140	281
Total Quantity ..	881,326	269,513	508,496	504,650	475,257
Total Value £’000 sterling	40,996	18,617	35,400	35,384	37,744

(*a*) Greasy and scoured. (*b*) Included with Other Foreign Countries.

Australian wool represented 55.4 per cent. of the total quantity imported into the United Kingdom during the four years ended 1946. New Zealand supplied 28.8 per cent. and South Africa 10.6 per cent., while the total quantity received from British possessions constituted 98.8 per cent. of all United Kingdom imports.

15. **Principal Importing Countries and Sources of Supply.**—The following table furnishes, in respect of the principal importing countries, details of their production and imports of wool for 1938, together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured. They also exclude any wool imported on skins. Later details are not available.

WOOL : PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1938.

(In millions of lb.)

Importing Country.	Production(*a*) of Importing Country.	Quantity imported from—					Total Imports.
		Australia.	Union of South Africa.	Argentine.	New Zealand.	Other Countries.	
United Kingdom ..	110.0	365	107	79	198	132	881
Belgium	0.7	106	19	20	7	65	217
Czechoslovakia ..	2.0	18	4	6	..	1	29
France	54.4	168	52	62	22	86	390
Germany.. ..	44.5	49	90	56	14	97	306
Italy	33.0	19	22	12	..	23	76
Japan	..	87	5	6	11	8	117
Poland	12.9	14	2	14	4	..	34
U.S.A.	457.7	7	1	47	4	44	103
Total ..	..	833	302	302	260	456	2,153

(*a*) As in the grease.

As a considerable transit trade exists between continental countries, it must not be assumed that the whole of the imports recorded by these countries are retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom, Belgium, and France. The quantities re-exported during 1938 were :—United Kingdom, 269 million lb., or 30 per cent., of the total imports ; Belgium, 76 million lb., or 35 per cent. ; and France, 49 million lb., or 13 per cent.

§ 6. Trade in Hides and Skins.

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported : the value of cattle and horse hides, and sheep and other skins sent overseas during the five years ended 1945–46 amounted to £34,781,323, or an average of £6,956,265 per annum.

2. **Sheepskins with Wool.**—The exports of sheepskins with wool, aggregating £9,688,183 during the five years above, constitute an important item in the values referred to in the preceding paragraph, although the largest export in this period was that of rabbit skins valued at £20,003,742. During 1938–39 France was the largest purchaser of sheepskins with wool, taking 74 per cent. of the total consignments, while the United Kingdom ranked next with 15 per cent., followed by Germany with 7 per cent. In 1945–46, France obtained 47 per cent. of total exports, the United States of America 28 per cent., Belgium, 12 per cent., and the United Kingdom, 11 per cent. The exports of sheepskins with wool during each of the years 1942–43 to 1945–46 compared with 1938–39 were as follows :—

EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number ..	12,625,200	4,616,761	3,220,448	6,716,400	18,811,654
Value £A.	2,301,800	1,078,941	1,000,386	1,489,602	4,363,835

3. **Sheepskins without Wool.**—Up to 1943–44 sheepskins without wool were exported chiefly to the United States of America. During the year mentioned this country accounted for 97 per cent. of the total shipments while the remaining 3 per cent. were exported to the United Kingdom, Canada and the Soviet Union. In 1944–45 and 1945–46, however, there was a decline in shipments to the United States of America and an increase in the quantities shipped to the United Kingdom; in the latter year these countries received 46 per cent. and 53 per cent. of total shipments, respectively. Quantities and values for the four years 1942–43 to 1945–46 compared with 1938–39 are shown in the table hereunder :—

EXPORTS OF SHEEPSKINS WITHOUT WOOL : AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number ..	1,075,895	3,642,179	3,651,958	4,010,146	2,850,201
Value £A.	68,152	307,477	337,374	343,142	243,126

4. **Hides.**—(i) *Exports.* The export trade in cattle hides during 1945–46 was distributed as follows :—United Kingdom, £138,019; United States of America, £75,918; Belgium, £12,400; Other countries, £3,205.

The exports during the four years 1942–43 to 1945–46 compared with 1938–39 are shown in the table below :—

EXPORTS OF CATTLE HIDES : AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number ..	1,186,543	72,526	171,421	157,432	189,863
Value £A.	896,752	49,156	273,044	206,925	229,542

Calfskins exported during the five years ended 1945–46 numbered 38,904 valued at £14,720. Export of horse hides during the same period numbered 74,477, valued at £97,913.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly large, the chief source of supply being New Zealand, and small quantities are obtained from the Pacific Islands, France and Italy. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1938–39 and 1942–43 to 1945–46 were as follows :—

IMPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Quantity cwt.	80,641	73,673	47,139	50,355	60,600
Value £A.	280,273	316,255	176,038	205,181	365,092

5. **Other Skins.**—The exports of skins other than those mentioned in the preceding paragraphs were valued as follows :—

EXPORTS OF OTHER SKINS : AUSTRALIA.

Description.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£A.	£A.	£A.	£A.	£A.
Rabbit ..	(a) 429,140	1,986,198	4,493,699	3,864,263	(a) 6,290,938
Opossum ..	16,040	13,638	37,593	135,936	86,903
Kangaroo ..	169,078	158,236	210,889	338,238	477,330
Fox	27,767	89,946	272,389	78,066	52,845
Wallaby ..	9,640	13,462	50,082	19,885	26,570
Other ..	25,912	11,894	65,878	90,115	21,179
Total ..	677,577	2,273,374	5,130,530	4,526,503	6,955,765

(a) Includes hare skins.

These skins were shipped principally to the United States of America, the United Kingdom and Canada and the values taken by each in 1945–46 are shown in the following table :—

OTHER SKINS : EXPORTS TO UNITED STATES AND UNITED KINGDOM, 1945-46.

Country.	Rabbit Skins.(a)	Kangaroo Skins.	Fox Skins.	Other (Opossum, Wallaby, etc.).	Total.
	£A.	£A.	£A.	£A.	£A.
United Kingdom ..	206,300	36,916	36,987	41,764	321,967
United States of America ..	5,519,742	431,992	15,733	85,806	6,053,273
Canada	541,401	8,422	..	6,357	556,180
Other Countries	23,495	..	125	725	24,345
Total	6,290,938	477,330	52,845	134,652	6,955,765

(a) Includes hare skins.

6. **Marketing of Hides and Skins.**—(i) *Sheepskins with Wool.* In April, 1940, the United Kingdom Government agreed with the Commonwealth Government to acquire the "exportable surplus" of woolled sheepskins in Australia.

The "exportable surplus" is determined by competition at auction between Australian fellmongers and export packers licensed in terms of their pre-war trade in such product.

The price of the woolled skins was fixed by appraisement under the Sheepskin Table of Limits, which took into account the following factors :—

(a) The wool content—the value of which is fixed in relation to the "scoured skin wool" section of the Wool Table of Limits ;
(b) the value of the pelt—which is reviewed quarterly : and
(c) the cost of fellmongering the skins.

The contract with the United Kingdom expired on 30th June, 1946 and, since then sheepskins have been marketed principally at open auction with export freely permitted as in pre-war times.

Owing to the high world parity price levels of wool and pelts, sheepskin prices have been very high since the return to open marketing.

(ii) *Sheep and Lamb Pelts.* Pelt prices rose rapidly overseas in the war years and, by 1944, it had become essential to establish some form of marketing control in order to safeguard the Australian sheep leather tanning industry. The Sheep and Lamb Pelt Advisory Committee was established to allocate to tanners their current requirements from the production of Australian fellmongeries.

The Committee has operated on a voluntary basis under the aegis of the Hide and Leather Industries Board.

The " two price " problem has continued in the post-war period and it has been necessary for the Committee to continue to function in 1947.

The future of this voluntary control is under consideration.

(iii) *Hides and Leather.* Late in 1939 it became necessary to introduce a scheme for the control of the marketing of hides and leather and suitable action was taken by Regulations under the National Security Act. The Australian Hide and Leather Industries Board was appointed to administer the scheme.

All cattle hides and yearling and calf skins were to be submitted for appraisement in accordance with a Table of Limits prepared by the Board. On appraisement they were acquired by the Board acting on behalf of the Commonwealth and thereupon became the property of the Commonwealth. The owners of the hides and skins immediately prior to acquisition received compensation at varying rates determined by the Minister from time to time. Hides and skins acquired by the Board are sold on behalf of the Commonwealth. Tanners' purchases of hides are regulated and exports of hides, skins and leather are controlled.

When the scheme commenced, hide export prices were much higher than the domestic appraised prices which, in the case of hides, were 20 per cent. above immediate pre-war levels. About the middle of 1940, however, the oversea market for hides and skins collapsed. The scheme stood the strain of the reversed position. Appraisement continued as before, the rates of compensation to hide owners were reduced by 25 per cent. for a time and the fund already built up by the Board acted as a cushion for the change-over period.

The export price position later improved and continued to improve to such an extent that, about the end of 1941, the healthy position of the Board's funds enabled compensation to be paid to the original owners of hides at the rate of 110 per cent. of the appraised prices. The rate of compensation has since varied from time to time according to the state of the Board's finances, the highest rate of compensation reached being 120 per cent. of the appraised prices. The exceptionally heavy demand for hides for the production of leather necessary to manufacture large quantities of military boots resulted in a war-time demand by Australian tanners for hides which exceeded Australian hide production. A special arrangement was entered into with the New Zealand Government for the purchase of New Zealand hides, and additional quantities were sought from other sources of supply. The production of leather in Australia now greatly exceeds pre-war levels and hide exports from Australia are small.

World parity prices of hides and leather are still far above Australian domestic price levels and the Commonwealth Government has found it necessary to continue in 1948 the marketing control scheme which has operated since 1939.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940. After the outbreak of war, rabbit skin prices rose sharply owing to the keen demand from overseas. In order that the prices of military and civilian hats in Australia might be kept at reasonable levels and that sufficient skins should be available to Australian hat manufacturers at prices which would enable them to produce hats at those price levels, a scheme of marketing control became necessary.

The Australian Rabbit Skins Board was appointed to administer the scheme. The basis of the scheme is the payment to hat manufacturers of compensation equivalent to the difference between appraised prices in a Table of Limits prepared by the Board, which are based on a Commonwealth Prices Commission determination, and ruling open market prices.

Funds for the payment of such compensation are provided by collections from a levy imposed on the export of rabbit skins under the Rabbit Skins Export Charges Act 1940. Since 1941 rabbit-skin prices have been extraordinarily high, reaching a peak in 1946. The rate of export levy has fluctuated on a number of occasions according to the state of the Board's finances. In some periods the levy was entirely suspended, whilst the highest rate it has reached has been 18d. per lb. The imposition of the levy was suspended in October, 1944, and during this period the Board operated on reserve funds. It was renewed in July, 1946, but in January, 1947, approval was given for a further suspension until May, 1947. In order that compensation payments should be kept as low as possible, the quantities of rabbit skins which hat manufacturers may buy at appraised prices are closely regulated. Investigations into the operations of all Australian hat manufacturing establishments have enabled the Board to do this, although the position was complicated by the heavy demand for military fur felt hats. The future of the scheme in the post-war period beyond 1947-48 has yet to be determined.

§ 7. Tallow.

1. **Production.**—Australia's production of tallow is in excess of local requirements and considerable quantities are normally available for export. The recorded production in factories is incomplete as production in establishments which do not come within the definition of a factory is excluded. More complete details, but on a calendar year basis, are however, available. These relate to production in all slaughtering establishments and are shown in the following table for each year 1943 to 1946.

TALLOW : PRODUCTION IN SLAUGHTERING ESTABLISHMENTS, AUSTRALIA.

Type.	1943.	1944.	1945.	1946.
	cwt.	cwt.	cwt.	cwt.
Edible	1,152,825	1,050,124	898,831	354,934
Inedible	315,423	300,017	222,533	712,840
Total	1,468,248	1,350,141	1,121,364	1,067,774

2. **Consumption.**—Details of net exports and consumption in factories are given in the following table for the four years 1942–43 to 1945–46 in comparison with 1938–39 :

TALLOW : NET EXPORTS AND CONSUMPTION IN FACTORIES, AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	cwt.	cwt.	cwt.	cwt.	cwt.
Net Exports	560,241	99,059	590,676	421,573	146,445
Consumption by Factories..	539,095	1,083,424	896,213	900,363	850.095

3. **Marketing.**—A modified control operates on the marketing of tallow. Exports of tallow are closely regulated. In respect of tallow shipped overseas the excess returns received over the fixed Australian domestic prices are paid by the exporters into a pool or equalization fund, from which a distribution is made to tallow producers generally.

CHAPTER XX.

AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§. 1. Introductory.

A brief reference to the attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Official Year Book. (See No. 22, p. 670.)

§ 2. Progress of Agriculture.

1. **Early Records.**—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797", Governor Hunter gives the acreage of crops as follows :—Wheat, 3,361 acres ; maize, 1,527 acres ; barley, 26 acres ; potatoes, 11 acres ; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops :—Wheat, 6,874 acres ; maize, 3,389 acres ; barley, 544 acres ; oats, 92 acres ; peas and beans, 100 acres ; potatoes, 301 acres ; turnips, 13 acres ; orchards, 546 acres ; and flax and hemp, 37 acres.

By the year 1850 the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania, 229,000 acres, and New South Wales, 223,000 acres.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eight seasons ended 1945–46 :—

AREA OF CROPS.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860–61	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870–71	385,151	692,840	52,210	801,571	54,527	157,410	..	..	2,143,709
1880–81	606,277	1,548,809	113,978	2,087,237	63,902	140,788	..	..	4,560,991
1890–91	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900–01	2,446,767	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,813,666
1910–11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360		11,893,838
1920–21	4,465,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1930–31	6,811,247	6,715,660	1,144,216	5,426,075	4,792,017	267,632	1,550	5,419	25,163,816
1938–39	7,049,357	5,019,299	1,734,789	4,724,090	4,719,254	243,048	1,116	6,827	23,497,780
1939–40	6,381,531	5,002,362	1,726,091	4,541,614	4,331,299	258,038	340	8,119	22,249,394
1940–41	6,374,354	4,467,191	1,734,248	4,254,348	4,026,969	253,941	322	6,457	21,117,830
1941–42	5,929,553	4,734,613	1,671,336	3,976,232	3,852,092	280,970	..	5,549	20,450,345
1942–43	5,297,313	3,816,430	1,742,802	3,436,675	2,819,713	300,005	..	6,779	17,419,717
1943–44	4,797,385	3,462,537	1,757,396	2,760,778	2,782,414	334,933	..	6,769	15,902,212
1944–45	5,044,792	4,310,152	1,796,833	3,179,374	2,790,376	342,916	..	7,410	17,471,853
1945–46	6,087,566	5,327,122	1,822,108	3,824,128	2,944,879	411,824	..	8,846	20,426,473

The progress of agriculture was practically uninterrupted from 1860 to 1915–16, when, as the result of a special effort to raise wheat during the 1914–18 War, 18,528,234 acres were cultivated in Australia. Four years later the area of crops declined to 13,296,407 acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum of 25,163,816 acres in 1930–31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935–36. Subsequently the area increased, and reached a maximum of 23½ million acres in 1938–39. Thereafter it declined to under 16 million acres in 1943–44, then rose again to nearly 20½ million acres in 1945–46. These fluctuations approximated to changes in wheat areas. Following the outbreak of war in 1939, the area under crop declined with each successive year until 1944–45, when the areas started to increase. This movement was contrary to the experience of the 1914–18 War when the decline did not occur until the third war-year.

3. **Area under Sown Pastures.**—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops" have expanded from 5¼ million acres in 1929–30 to approximately 10 million acres in 1945–46.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Minister for Commerce and Agriculture and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principle functions of the Council are :—(i) the promotion of the welfare and development of agricultural industries generally ; (ii) the improvement of the quality of agricultural products and the maintenance of high grade standards ; (iii) to ensure, as far as possible, balance between production and available markets ; and (iv) organized marketing, etc.

In addition a permanent technical committee known as the Standing Committee on Agriculture was formed to act in an advisory capacity to the Council. Its functions are :—(i) to secure co-operation and co-ordination in agricultural research throughout Australia ; (ii) to advise the Commonwealth and State Governments, either directly or through the Council, on matters pertaining to the initiation and development of research on agricultural problems ; and (iii) to secure co-operation between the Commonwealth and States and between the States in respect of quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Council for Scientific and Industrial Research, the Commonwealth Director-General of Health, the Secretary, Department of Commerce and Agriculture, the Director-General of Agriculture and the Commonwealth Treasury. The membership of the Standing Committee was extended during the 1939–45 War to include the Department of Labour and National Service, the Department of Supply and Shipping and the Commonwealth Bureau of Census and Statistics. This war-time arrangement was terminated in 1947.

§ 3. Distribution, Production and Value of Crops.

1. **Distribution of Crops.**—The following table shows the areas in the several States and Territories of each of the principal crops for the season 1945–46. Similar details for the season 1944–45 appear in Part II. of *Production Bulletin* No. 39.

AREA OF PRINCIPAL CROPS, 1945–46.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Barley (Grain)—									
2 Row ..	18,624	117,774	14,880	398,863	36,914	6,283	..	..	593,338
6 Row ..	10,269	16,358	6,169	42,967	29,472	463	..	78	105,776
Maize (Grain)	92,416	6,809	136,445	..	48	11	..	..	235,729
Oats (Grain) ..	617,070	511,483	40,007	369,733	396,285	13,976	..	493	1,949,047
Rice (Grain) ..	28,372	..	..	..	..	..	..	..	28,372
Rye (Grain) ..	456	7,698	43	33,311	1,490	656	..	..	43,654
Wheat (Grain)	3,773,901	3,251,393	392,502	2,165,004	1,835,780	4,982	..	1,822	11,425,384
Green Fodder ..	541,810	63,311	581,905	189,882	288,206	138,540	..	2,094	1,805,748
Hay ..	758,400	1,060,496	69,084	484,060	281,410	99,758	..	4,028	2,757,236
Other Stock Fodder ..	8,105	11,718	23,649	15,652	8,777	16,298	..	43	84,242
Grass and Other Seeds ..	7,456	8,058	2,216	11,933	7,571	1,192	..	..	38,426
Beans, Navy ..	8,550	58	2,420	..	..	30	..	..	11,058
Peas, Blue ..	..	416	..	86	..	23,278	..	..	23,780
Onions ..	747	8,170	2,537	511	383	52	..	8	12,408
Potatoes ..	22,865	63,000	15,216	8,854	9,781	56,245	..	118	176,079
Other vegetables for human consumption	70,898	49,424	45,873	8,721	10,835	10,743	..	57	196,551
Vines—									
Productive ..	14,931	41,468	2,507	55,902	8,622	..	..	3	123,433
Unproductive	1,052	1,375	496	1,538	961	..	..	..	5,422
Sugar-cane—									
Productive ..	5,943	..	229,736	..	..	..	..	..	235,679
Unproductive	9,123	..	92,158	..	..	..	..	..	101,281
Hops ..	..	153	..	..	15	1,191	..	..	1,359
Cotton ..	..	..	7,698	..	..	..	..	..	7,698
Tobacco ..	370	1,408	1,897	..	296	..	..	..	3,971
Broom Millet ..	3,704	1,195	240	..	50	..	..	..	5,189
Flax for Fibre	..	26,419	..	6,292	5,356	3,346	..	..	41,413
Orchards and other Fruit-gardens ..	84,062	69,479	34,946	27,223	21,730	32,284	..	99	269,823
All other Crops	8,442	9,459	119,484	3,596	897	2,496	..	3	144,377
Total Area ..	6,087,566	5,327,122	1,822,108	3,824,128	2,944,879	411,824	..	8,846	20,426,473

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories on the total area of crops for the season 1945–46 is shown in the next table. Similar details for the season 1944–45 appear in Part II. of *Production Bulletin* No. 39. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are green fodder, wheat, sugar-cane and maize, and in Tasmania, green fodder, hay, potatoes, orchards and fruit-gardens, blue peas and oats.

As pointed out previously, wheat is the main crop in Australia, the area thereof for grain only representing more than half the total area of crops in 1945–46.

RELATIVE AREAS UNDER CROP, 1945–46.

Crop.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust
	%	%	%	%	%	%	%	%	%
Wheat (Grain) ..	61.99	61.04	21.54	56.62	62.33	1.21	..	20.60	55.94
Hay	12.46	19.91	3.79	12.66	9.56	24.22	..	45.54	13.50
Oats (Grain) ..	10.14	9.60	2.20	9.67	13.46	3.39	..	5.57	9.54
Green Fodder ..	8.90	1.19	31.94	4.97	9.79	33.64	..	23.67	8.84
Barley (Grain) ..	0.47	2.52	1.15	11.55	2.25	1.64	..	0.88	3.42
Sugar-cane ..	0.25	..	17.67	..	..	..	..	..	1.65
Orchards and Fruit-gardens ..	1.38	1.30	1.92	0.71	0.74	7.84	..	1.12	1.32
Maize (Grain) ..	1.52	0.13	7.49	..	..	..	..	..	1.16
Potatoes	0.38	1.18	0.83	0.23	0.33	13.66	..	1.33	0.86
Vineyards ..	0.26	0.80	0.16	1.50	0.33	..	..	0.03	0.63
All other	2.25	2.33	11.31	2.09	1.21	14.40	..	1.26	3.14
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	..	100.00	100.00

(a) Not available.

3. **Area of Principal Crops in Australia.**—The area of the principal crops during each of the four seasons ended 1945–46, the last pre-war season 1938–39 and the average for the decennium ended 1938–39 is shown hereunder :—

AREA OF PRINCIPAL CROPS: AUSTRALIA.

Crop.	Average, ten years ended 1938–39.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46
	'000 acres.	'000 acres.	'000 acres.	'000 acres.	'000 acres.	'000 acres.
Barley (a)	428	650	356	357	500	593
Maize	295	324	285	283	257	236
Oats .. .	1,393	1,784	1,497	1,415	2,034	1,949
Rice	22	24	34	41	25	28
Wheat	14,345	14,346	9,280	7,875	8,463	11,425
Green Fodder . ..	1,272	1,789	2,112	2,265	2,043	1,806
Hay .. .	2,994	3,250	2,359	2,044	2,409	2.757
Beans and Peas . ..	49	43	77	57	37	35
Onions	8	7	10	10	12	12
Potatoes (b)	130	98	140	192	242	176
Other Vegetables for human consumption	(c) 34	(c) 66	(c) 129	199	240	197
Sugar-beet	3	4	1	1	..	
Vineyards .. .	118	127	130	129	129	120
Hops	1	1	1	1	1	1
Sugar-cane .	332	369	329	336	326	337
Cotton	43	66	56	11	17	8
Tobacco	12	8	7	7	5	4
Orchards	276	272	260	262	263	270
All Other Crops	203	270	357	387	469	463
Total	21,958	23,498	17,420	15,902	17,472	20,426

(a) Malting only. (b) Excludes Sweet Potatoes. (c) Market Gardens.

4. **Weights and Measures.**—The production of agricultural commodities in Australia is recorded either in terms of capacity or weight. When measured in terms of capacity the unit is the bushel of 2,218.192 cubic inches or gallon of 277.274 cubic inches. When measured in terms of weight, the unit adopted is either the long ton of 2,240 lb. (except in the case of flour, bran and pollard, when the short ton of 2,000 lb. is used), the hundredweight (cwt.) of 112 lb. or pound (lb.).

The production of cereals and fruit is recorded in bushels, the production of wine in gallons, while hay, vegetables, grapes and industrial crops are measured by weight, generally in terms of long tons or cwts.

In the following table the weights adopted per bushel are given for the more important cereals, fruits, etc. Several types of cases are used for fruits, but in determining the average weights shown below, that with a capacity of 2,223 cubic inches was adopted. The packed weight of a bushel of fruit also is subject to considerable variation according to the kind and variety of fruit.

Data compiled by the State Departments of Agriculture made available to this Bureau were used in determining these average fruit weights.

APPROXIMATE BUSHEL EQUIVALENTS.

Commodity.	Approximate Bushel Equivalent in lb.	Commodity.	Approximate Bushel Equivalent in lb.
Cereals—		Fruit—*continued.*	
Barley	50	Bananas	56
Canary Seed	56	Cherries	48
Maize	56	Citrus—	
Millets	60	Oranges	48
Oats	40	Mandarins	48
Panicum	60	Lemons	48
Rice (Paddy)	42	Grape Fruit	42
Rye	60	Custard Apples	35
Sorghum	60	Figs	44
Wheat	60	Mangoes	40
Legumes—		Nectarines	50
Beans	60	Passion Fruit	34
Peas	60	Peaches	45
Other Crops—Flax Seed ..	56	Pears	45
Fruit—		Persimmons	44
Apples	42	Plums and Prunes ..	58
Apricots	48	Quinces	42

5. **Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the four years ended 1945–46, the year 1938–39 and for the decennium ended 1938–39 :—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938–39.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Barley (*a*)	'000 bus.	7,480	9,704	6,782	6,397	4,188	9,581
Maize	,, ,,	7,228	7,057	6,885	7,433	6,463	5,729
Oats	,, ,,	16,437	15,555	21,532	17,712	8,970	25,774
Rice	,, ,,	2,005	2,775	3,084	4,015	1,693	2,735
Wheat	,, ,,	169,398	155,369	155,728	109,720	52,880	142,410
Hay	,, tons	3,490	3,321	3,116	2,717	1,994	3,493
Beans and Peas ..	,, bus.	734	495	(*b*)(*d*) 25	(*b*) 20	(*b*) 16	(*b*) 10
Onions	,, tons	43	18	55	47	67	67
Potatoes(*c*)	,, ,,	351	274	484	599	881	646
Sugar (Beet)	,, ,,	5	1.5	0.7	0.7	..	..
Grapes	,, ,,	381	402	480	527	358	447
Wine made	,, gals.	16,330	14,958	19,864	19,865	14,419	25,858
Raisins and Currants ..	,, tons	70	75	91	103	69	74
Hops	,, lb.	2,127	2,402	2,779	2,999	2,594	2,222
Sugar (Cane) ..	,, tons	658	823	650	524	670	666
Cotton, Unginned ..	,, lb.	15,667	13,688	14,058	9,540	8,508	1,819
Tobacco (Dried leaf) ..	,, ,,	5,336	4,046	4,969	4,633	2,844	2,505

(*a*) Malting only. (*b*) Tons. (*c*) Excludes Sweet Potatoes. (*d*) Incomplete.

6. **Average Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the four years ended 1945–46, for the year 1938–39 and the decennium ended 1938–39.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938–39.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Barley (*a*)	Bushel	17.49	14.92	19.03	17.89	8.38	16.15
Maize	,,	24.53	21.77	24.19	26.29	25.15	24.30
Oats	,,	11.80	8.72	14.38	12.52	4.41	13.22
Rice	,,	93.00	117.92	90.11	98.67	68.82	96.40
Wheat	,,	11.81	10.83	16.78	13.93	6.25	12.46
Hay	Ton	1.17	1.02	3.32	1.33	0.83	1.27
Onions	,,	5.54	2.74	5.63	4.61	5.59	5.38
Potatoes (*b*)	,,	2.71	2.80	3.45	3.12	3.64	3.67
Sugar (Beet)	,,	1.40	0.35	0.71	0.84	..	..
Grapes (*c*)	,,	3.45	3.43	3.86	4.26	2.89	3.62
Wine (*c*)	Gallon	340	300	397	402	290	4.71
Raisins and Currants (*c*) ..	Ton	1.28	1.26	1.39	1.57	1.05	1.23
Hops (*c*)	lb.	2,003	2,235	2,106	2,350	2,044	1,754
Sugar (Cane) (*c*)	Ton	2.76	3.14	2.70	2.29	2.96	2.83
Cotton, Unginned (*c*) ..	lb.	366	206	249	230	488	236
Tobacco (Dried leaf) ..	,,	463	511	693	700	596	631

(*a*) Malting only. (*b*) Excludes Sweet Potatoes. (*c*) Per acre of productive crops

7. **Gross Value of Agricultural Production in Australia.**—The following table shows the gross value of recorded agricultural production at the principal markets in Australia for the years 1938–39 and the five years ended 1945–46 :—

GROSS VALUE OF AGRICULTURAL PRODUCTION: AUSTRALIA.

Crops.	1938–39.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Barley (*a*)	1,417	2,316	1,124	1,856	1,324	3,007
Maize	1,503	1,632	2,251	2,530	2,189	2,054
Oats	2,085	2,697	2,911	2,471	2,654	4,573
Rice	540	506	759	983	416	672
Wheat	21,989	32,385	34,460	28,387	17,409	46,531
Green Fodder	2,999	3,764	4,205	(*e*) 4,170	3,646	3,854
Hay	12,704	12,988	14,445	13,488	13,119	18,445
Beans and Peas	253	455	607	599	502	307
Onions	306	543	781	696	1,129	961
Potatoes (*b*)	3,649	4,312	5,961	7,233	10,969	7,989
Other Vegetables for Human Consumption	(*c*) 2,473	(*c*) 2,941	(*d*) 12,114	14,864	16,361	15,124
Sugar-beet	27	53	14	17	9	3
Grapes	3,924	5,377	6,031	7,384	5,248	6,505
Hops	183	233	219	238	230	226
Sugar-cane	9,178	9,607	9,282	8,521	10,334	10,400
Cotton, Unginned	230	304	320	212	186	42
Tobacco (Dried leaf) ..	360	822	577	536	316	328
Orchards	9,695	10,512	14,253	19,406	17,021	18,750
All Other Crops	3.336	4,625	2,335	2,978	3,964	4,436
Total, Gross Value ..	76,851	96,072	112,649	116,569	107,026	144.207

(*a*) Malting only. (*b*) Excludes Sweet Potatoes. (*c*) Market Gardens. (*d*) Incomplete. Includes some values of vegetables for stock fodder. (*e*) Excludes Western Australia.

8. **Value of Production—Gross and Net.**—(i) *General.* Uniform methods for arriving at the gross and net values of production in the various States were finally determined at a Conference of Statisticians held in March, 1935. The returns for the year 1933–34 and subsequent years have been valued on the new basis, and a revaluation was made for the years back to 1928–29. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXVIII. " Miscellaneous ".

In computing the net value of production no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant; consequently the figure stated is inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1944-45 AND 1945-46.

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)	Depreciation (estimated).
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in process of production.		
				1944–45.			
	£	£	£	£	£	£	£
New South Wales ..	25,6 1,000	3,696,000	21,995,000	3,851,000	(b) 645,000	17,499,000	(c)
Victoria	23,911,774	2,313,681	21,598,093	5,386,218	1,311,913	14,899,962	900,000
Queensland ..	24,228,000	2,400,000	21,828,000	1,830,000	1,690,000	18,308,000	1,110,000
South Australia ..	13,620,624	1,114,963	12,505,661	2,480,804	1,026,993	8,997,864	594,493
Western Australia..	10,232,878	1,173,081	9,059,797	804,042	1,176,446	7,079,309	571,634
Tasmania ..	9,288,920	1,608,750	7,680,170	1,581 250	(b) 246,860	5,852,060	145,000
Total ..	106,973,196	12,306,475	94,666,721	15,933,314	6,097,212	72,636,195	e3,321,127
				1945–46.			
	£	£	£	£	£	£	£
New South Wales ..	47,972,000	6,941,000	41,031,000	4,597,000	(b) 777,000	35,657,000	(c)
Victoria (d) ..	33,156,746	3,841,301	29,315,445	7,535,996	1,452,611	20,326,838	900,000
Queensland ..	24,831,000	2,500,000	22,331,000	1,870,000	1,730,000	18,731,000	1,140,000
South Australia ..	18,862,880	1,785,462	17,077,418	2,252,839	1,043,666	13,780,913	594,493
Western Australia..	11,745,265	1,307,129	10,438,136	978,831	1,360,345	8,098,960	573,207
Tasmania ..	7,550,670	1,446,260	6,104,410	1,513,520	(b) 246,450	4,344,440	130,500
Total ..	144,118,561	17,821,152	126,297,409	18,748,186	6,610,072	100,939,151	e3,338,200

(a) No deduction has been made for depreciation and maintenance. (b) No allowance made for costs of power, power kerosene, petrol and other oils. (c) Not available. (d) Subject to revision. (e) Incomplete.

(ii) *States* 1936–37 *to* 1945–46. In the following table the net value of agricultural production and the net value per head of population are given by States for the years 1936–37 to 1945–46:—

VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			NET VALUE.(a)				
	£	£	£	£	£	£	£
1936–37	19,364,000	16,356,341	10,706,000	9,057,406	5,921,108	1,708,630	63,113,485
1937–38	14,829,000	14,962,412	11,264,000	9,159,941	6,142,705	2,482,500	58,840,558
1938–39	11,804,000	5,619,765	11,615,000	5,489,228	4,065,616	3,084,971	41,678,580
1939–40	16,367,000	11,907,131	13,696,000	9,458,140	7,064,100	2,433,760	60,926,131
1940–41	9,323,000	7,097,209	13,723,000	6,048,310	3,678,106	1,730,480	41,600,105
1941–42	16,043,000	15,511,086	13,380,000	7,769,642	6,528,077	3,179,810	62,411,615
1942–43	24,444,000	19,026,308	15,416,000	10,316,341	5,490,585	3,525,910	78,219,144
1943–44	27,916,000	16,062,900	16,755,000	10,738,133	5,841,624	4,826,620	82,140,277
1944–45	17,499,000	14,899,962	18,308,000	8,997,864	7,079,309	5,852,060	72,636,195
1945–46	35,657,000	20,326,838	18,731,000	13,780,913	8,098,960	4,344,440	100,930.151

(a) No deduction has been made for depreciation and maintenance.

VALUE OF AGRICULTURAL PRODUCTION—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF MEAN POPULATION.							
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1936–37	7 4 6	8 16 7	10 17 7	15 7 11	13 2 1	7 7 2	9 5 6
1937–38	5 9 6	8 0 9	11 6 4	15 10 2	13 8 8	10 11 3	8 11 5
1938–39	4 6 4	2 19 11	11 10 9	9 4 8	8 15 9	13 0 5	6 0 4
1939–40	5 18 7	6 6 0	13 8 5	15 16 1	15 1 7	10 3 5	8 14 2
1940–41	3 7 0	3 13 11	13 5 11	10 1 10	7 15 7	7 3 11	5 17 9
1941–42	5 14 7	7 18 11	12 17 11	12 16 0	13 14 7	13 5 3	8 15 0
1942–43	8 12 10	9 13 3	14 15 10	16 16 10	11 8 11	14 12 5	10 17 6
1943–44	9 5 9	8 1 9	15 17 0	17 7 5	12 2 6	19 16 4	11 6 4
1944–45	6 1 6	7 8 9	17 2 0	14 7 11	14 10 6	23 15 4	9 18 1
1945–46	12 4 9	10 1 2	17 5 0	21 15 8	16 9 3	17 8 4	13 12 4

§ 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

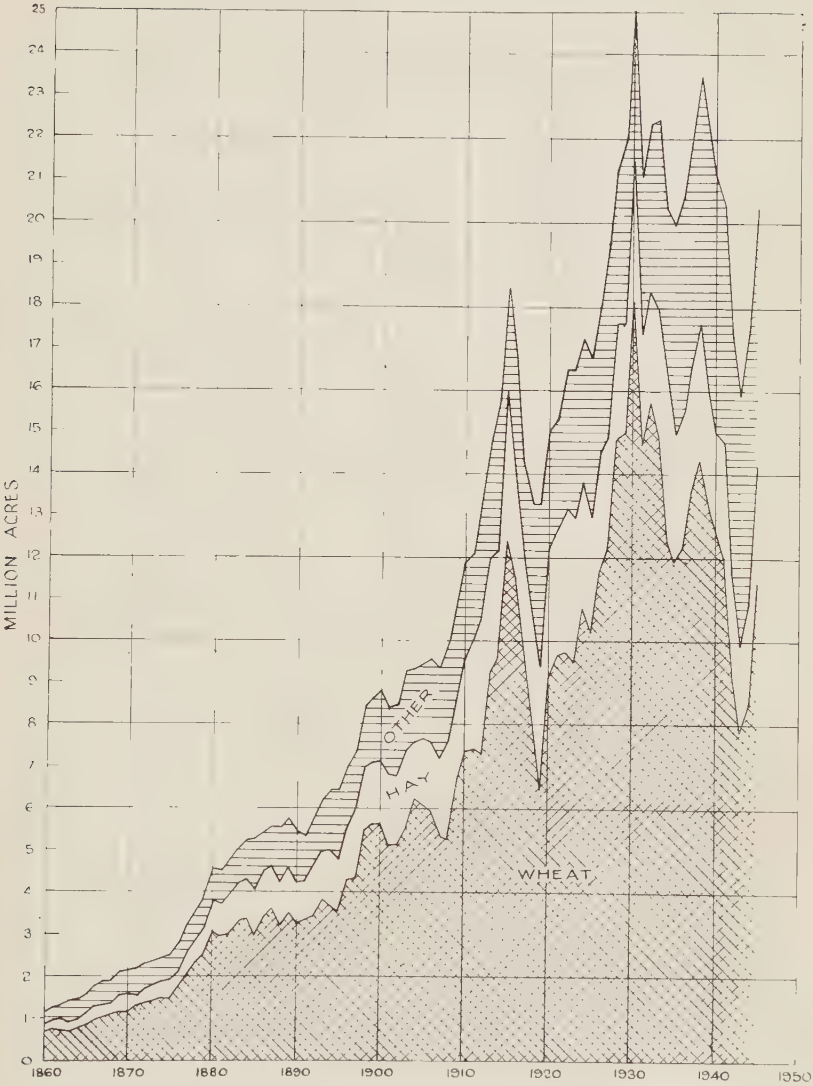
Reference to the financial assistance to the wheat industry will be found in § 20, Bounties, hereafter.

2. **Wheat Production Costs Committee.**—A Wheat Production Costs Committee was appointed by the Commonwealth Government in February, 1947, to enquire into and report upon :—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of costs could be established as an index to periodical variations in costs of the production of wheat. The Committee has submitted its report to the Commonwealth Government.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—The licensing of areas sown to wheat throughout Australia during each of the seasons 1941–42 to 1947–48 continued under the direction of the Wheat Stabilization Board. The area allotted to each grower is fixed in proportion to the average area normally sown by him, principally in the three years 1938–39 to 1940–41. Although licensing continued during the seasons 1945–46, 1946–47 and 1947–48, growers were permitted to plant without restriction in those years. In Western Australia growers' acreages during 1942–43 were restricted to a maximum of two-thirds of their basic acreage which restriction continued during the 1943–44 and 1944–45 seasons. During 1945–46 no such restriction was imposed but where growers voluntarily restricted the area sown to five-sixths or less of their basic acreage, compensation equal to one-sixth of their basic acreage was payable subject to the qualification that half of the area licensed for wheat was cropped for grain.

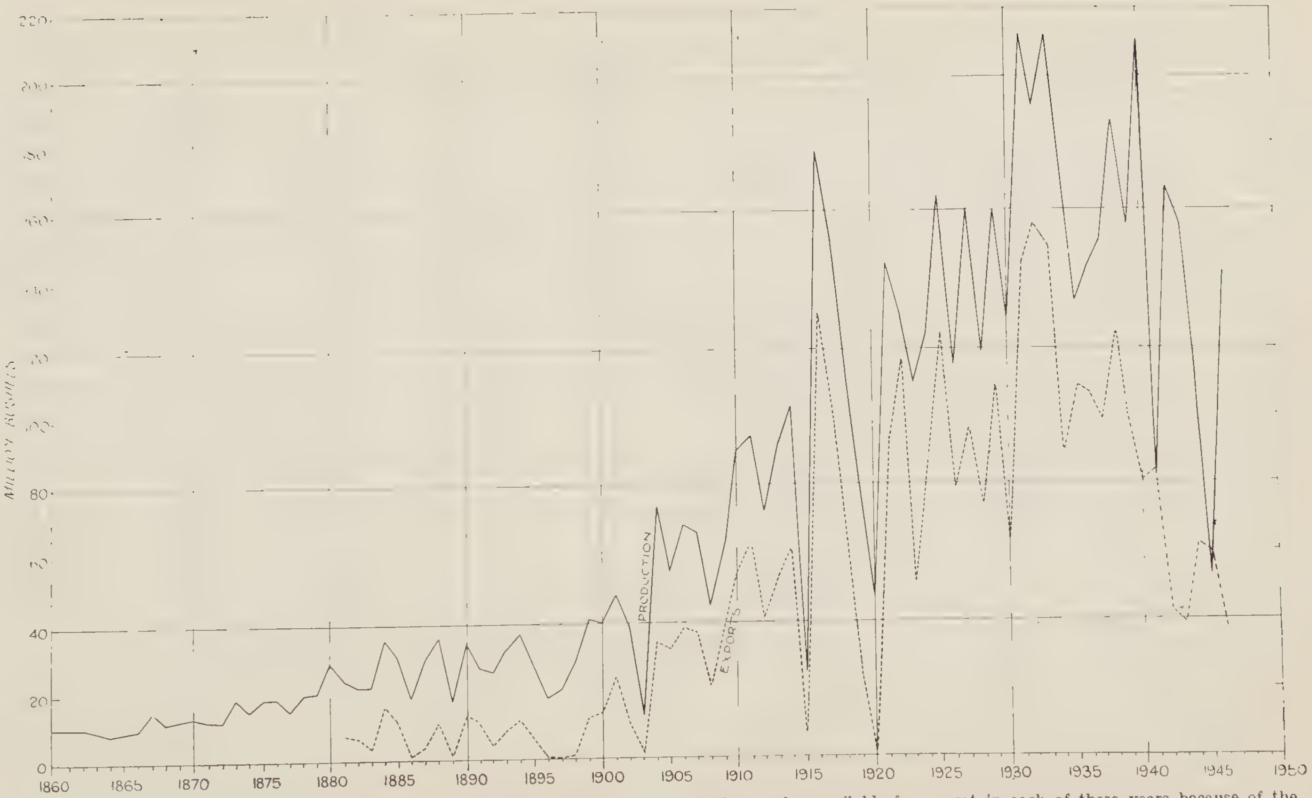
In the following table supplied by the Wheat Stabilization Board the basic acreage (i.e., the area normally sown by growers, principally in the three years 1938–39 to 1940–41) and the areas licensed to grow wheat for grain are shown for each State and the Australian Capital Territory for the years 1943–44 to 1947–48. Details of the area sown as well as the percentage that these areas bear to the area licensed are also given.

AREA OF CROPS—AUSTRALIA, 1860–61 TO 1945–46.



Explanation.—The total area of crops is shown by the top curve in this graph, and the area of wheat by the bottom curve. The vertical distances between these curves and that in the centre indicate the areas of hay and other crops.

PRODUCTION AND EXPORTS OF WHEAT—AUSTRALIA, TO 1945-46.



NOTE.—The export figures for the years 1915–16 to 1920–21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914–1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

WHEAT FOR GRAIN: LICENSED AND SOWN ACREAGES.

('000 acres.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.
Basic Acreage	5,014	3,333	481	3,058	3,243	12	1	15,142
1943–44—								
Area licensed	3,692	2,395	474	2,132	(c) 1,950	4	2	10,649
Area sown	2,693	1,793	281	1,534	(c) 1,567	5	2	7,875
Area sown as a percentage of area licensed per cent.	73	75	59	73	80	..	..	74
Number of licences issued No.	19,884	15,181	3,582	14,727	8,692	(a)	(a)	(b) 62,066
1944–45—								
Area licensed	3,992	2,562	523	2,215	(c) 1,980	3	2	11,277
Area sown	2,845	2,142	332	1,623	(c) 1,516	4	1	8,463
Area sown as a percentage of area licensed per cent.	71	84	63	73	76	..	75	75
Number of licences issued No.	21,566	15,810	3,675	14,743	8,683	(a)	(a)	(b) 64,477
1945–46—								
Area licensed	(e) 4,880	(e) 3,570	(e) 524	(e) 2,829	(d) 2,559	3	2	(e) 14,367
Area sown	3,774	3,251	392	2,165	(d) 1,836	5	2	11,425
Area sown as a percentage of area licensed per cent.	77	91	75	77	72	167	100	80
Number of licences issued No.	23,340	18,099	3,436	15,507	8,475	132	30	69,019
1946–47—								
Area licensed	(e) 5,540	(e) 4,087	(e) 618	3,240	(e) 3,364	4	(e) 3	(e) 16,856
Area sown(*f*)	4,475	3,501	248	2,519	2,419	8	3	13,172
Area sown as a percentage of area licensed per cent.	81	86	40	78	72	200	100	78
Number of licences issued No.	24,983	21,190	4,400	17,690	10,093	189	26	78,571
1947–48(*f*)—								
Area licensed	(e) 6,100	(e) 3,723	(e) 671	3,050	(e) 3,477	6	(e) 5	(e) 17,032
Area sown	5,043	3,227	462	2,369	2,760	8	5	13,874
Area sown as a percentage of area licensed per cent.	83	87	69	78	79	133	100	81
Number of licences issued No.	26,494	20,354	4,785	17,732	9,679	213	32	79,289

(*a*) Not available. (*b*) Excludes Tasmania and Australian Capital Territory. (*c*) Compulsorily restricted by one-third. (*d*) Restriction not compulsory but compensation paid where area is voluntarily restricted. (*e*) Includes areas temporarily licensed on temporary wheat farms. (*f*) Subject to revision.

4. **Survey of Legislation Relating to Wheat Industry.**—A survey of legislation passed by the Commonwealth Government relating to the wheat industry of Australia will be found in the Appendix to this volume.

5. **Wheat Farms.**—Particulars of the number of farms growing wheat for grain on 20 acres and upwards during each of the five years ended 1940–41 and the year 1946–47 are shown in the following table. It should be noted that a farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING WHEAT FOR GRAIN ON 20 ACRES AND UPWARDS.

State.	1936–37.	1937–38.	1938–39.	1939–40.	1940–41.	1946–47.
	No.	No.	No.	No.	No.	No.
New South Wales ..	15,425	16,287	16,550	16,175	15,831	15,971
Victoria	12,090	12,936	12,305	12,065	11,972	13,155
Queensland	2,211	2,809	3,190	2,542	2,169	2,006
South Australia ..	12,155	12,251	11,842	11,468	10,986	10,412
Western Australia ..	8,625	8,841	8,989	8,482	8,074	7,460
Tasmania	379	372	146	143	140	122
Total ..	50,885	53,496	53,022	50,875	49,172	49,126

6. **Area, Production and Average Yield.**—(i) *Area.* Wheat is the principal crop raised in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery

of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion. The most serious interruptions in more recent years were those occasioned by the two World Wars and the economic depression of the early thirties.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area and yield of wheat for grain in each State are given below for 1938–39 and the five years ended 1946–47; the table also includes the averages for the ten year periods ended 1938–39 and 1945–46 :—

WHEAT FOR GRAIN: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 OMITTED).								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres
Average for ten seasons ended 1938–39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1938–39 ..	4,651	2,748	442	3,080	3,413	10	2	14,346
1942–43 ..	3,033	2,145	335	2,009	1,753	4	1	9,280
1943–44 ..	2,693	1,794	281	1,534	1,567	5	1	7,875
1944–45 ..	2,845	2,142	332	1,623	1,516	4	1	8,463
1945–46 ..	3,774	3,251	392	2,165	1,836	5	2	11,425
1946–47 ..	4,475	3,501	248	2,519	2,419	7	3	13,172
Average for ten seasons ended 1945–46 ..	3,825	2,542	341	2,425	2,394	9	2	11,538
PRODUCTION ('000 OMITTED).								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels
Average for ten seasons ended 1938–39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1938–39 ..	59,898	18,104	8,584	31,675	36,844	205	59	155,369
1942–43 ..	51,693	41,803	5,005	36,526	20,600	73	28	155,728
1943–44 ..	47,500	19,733	5,084	20,691	16,550	122	39	109,719
1944–45 ..	17,134	3,497	6,981	9,244	15,929	93	2	52,880
1945–46 ..	62,520	20,634	8,188	21,034	20,929	67	38	142,410
1946–47 ..	15,682	48,971	705	27,906	23,800	139	59	117,262
Average for ten seasons ended 1945–46 ..	49,850	30,932	5,517	28,075	26,805	205	35	141,419

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 897. A graph showing the distribution in 1924–25 is shown in Official Year Book, No. 22, p. 695 and the distribution of area for 1938–39 is shown in Official Year Book No. 34, p. 451.

(ii) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

It should be noted, however, that with improved farming methods, which include the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during four decades to 1940 have shown a continued improvement, and fluctuations in production have become less pronounced.

Australia's wheat production in 1945–46 amounted to 142.4 million bushels representing an average yield of 12.46 bushels per acre. This was 90 million bushels more than in 1944–45 which was one of the worst seasons in the history of wheat-growing in this country. It approximates the average for the decennium ended 1945–46 but is 27 million bushels below that obtained during the ten years ended 1938–39.

Production for the season 1946–47 amounted to 117.3 million bushels whilst that for the season 1947–48 reached the record quantity of 220 million bushels.

(iii) *Decennial Averages,* 1861–70 *to* 1937–46. The following table shows the average area, production and yield per acre for decennial periods since 1861, together with the average wholesale price since 1871. The price quoted represents the arithmetic mean of the annual averages at Melbourne (f.o.r. Williamstown), and may be accepted as fairly representative for Australia.

WHEAT FOR GRAIN : AVERAGE AREA, PRODUCTION AND WHOLESALE PRICE, AUSTRALIA.

Decennium.	Area.	Production.	Yield per Acre.	Average Wholesale Price.
	'000 Acres.	'000 Bushels.	Bushels.	*s. d.*
1861–70	831	10,622	12.77	(*a*)
1871–80	1,646	17,711	10.76	5 1
1881–90	3,258	26,992	8.29	4 7
1891–1900	4,087	29,934	7.32	3 8
1901–10	5,711	56,058	9.82	3 10
1911–20	8,928	95,480	10.69	5 0
1921–30	11,291	135,400	11.99	5 8
1931–40	14,176	177,758	12.54	3 4½
1937–46	11,538	141,419	12.26	4 5

(*a*) Not available.

(iv) *Average Yield.* In the next table will be found the average yield of wheat per acre for specified periods :—

WHEAT FOR GRAIN : YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Average 10 seasons ended 1938–39	13.00	12.54	14.88	9.84	11.34	21.73	20.63	11.81
1938–39 ..	12.88	6.59	19.42	10.28	10.79	20.84	28.74	10.83
1942–43 ..	17.04	19.49	14.95	18.18	11.75	17.76	24.88	16.78
1943–44 ..	17.64	11.00	18.07	13.49	10.56	25.24	27.75	13.93
1944–45 ..	6.02	1.63	21.00	5.70	10.51	24.18	1.22	6.25
1945–46 ..	16.57	9.11	20.86	9.72	11.40	13.38	21.20	12.46
1946–47 ..	3.50	13.99	2.84	11.08	9.84	18.47	18.09	8.00
Average 10 seasons ended 1945–46	13.03	12.17	16.16	11.58	11.20	22.29	20.08	12.26

Variation in the average yield is chiefly due to the vagaries of the seasons. The best average yields for single seasons since 1901 were obtained in 1920–21, 16.08 bushels ; in 1924–25, 15.20 bushels ; in 1939–40, 15.84 bushels ; and in 1942–43, 16.78 bushels.

(v) *Relation to Population.* The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports from the mainland to satisfy its needs, though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to three-quarters of the crop is exported overseas.

7. **Varieties of Wheat Sown.**—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrar (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which has accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Council for Scientific and Industrial Research but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States*, 1940. Particulars of the varieties of wheat sown and the areas thereunder were collected annually up to 1940. The collection was then suspended but was resumed in 1946–47. Details of the nine principal varieties sown in 1946 in the four main producing States and the percentage each bears to the total area sown are given in the following table.

WHEAT : PRINCIPAL VARIETIES SOWN, 1946.

New South Wales.		Victoria.		South Australia.		Western Australia.	
Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.
	%		%		%		%
Bencubbin	45.7	Quadrat	26.9	Bencubbin	23.4	Bencubbin	33.5
Ford	10.8	Ghurka	20.3	Ranee	9.6	Bungulla	21.9
Dundee	4.7	Pindar	9.8	Waratah	5.8	Gluclub	18.1
Eureka	4.1	Magnet	9.1	Sword	5.8	Ranee	4.3
Bordan	3.4	Ranee	8.8	Dundee	5.4	Merredin	3.8
Ranee	3.2	Bencubbin	8.4	Gluyas	4.8	Waratah	2.0
Waratah	2.7	Regalia	4.8	Bobin	3.8	Nabawa	1.5
Gular	2.7	Dundee	2.1	Marathon	3.6	Ford	1.2
Eureka 2	2.1	Bobin	1.4	Nabawa	3.1	Dundee	1.2
All other	20.6	All other	8.4	All other	34.7	All other	12.5
Total	100.0	Total	100.0	Total	100.0	Total	100.0

Continued progress in the breeding of new and better wheats has resulted in many changes in the varieties sown. Bencubbin, previously a variety relatively unimportant outside Western Australia, was the leading wheat sown in 1946 in New South Wales, South Australia and Western Australia. In Victoria it holds only a minor place although the area sown to this variety has increased. Other important varieties sown in New South Wales in 1946 include Ford and Dundee which, as in 1940, occupy second and third position. The leading variety sown in Victoria in 1940 was Quadrat followed by Ghurka and Pindar compared with Ghurka, Ranee and Dundee in 1940. In South Australia, the next leading varieties after Bencubbin were Ranee and Waratah. In 1940 the three leaders in South Australia were Ranee, Bencubbin and Dundee. The principal variety in Western Australia since 1934 has been Bencubbin. The percentage sown to this variety, which in 1934 was 22.5, rose to nearly 36 in 1940, but declined to 33.5 in 1946. Bungulla, a variety not previously recorded, occupies second place in 1946, supplanting Gluclub which is now in third position.

8. **F.A.Q. Standard of Wheat.**—The Chambers of Commerce in each of the four main wheat States each year determine the "f.a.q." standard for the State. "F.a.q." means "fair average quality", and the standard is used as the basis for sales of the season's crop. It represents the average quality for the season, and this average varies from year

to year, and from State to State. "F.a.q." is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed, and do not vary from year to year.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined.

The following table sets out the f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States from 1938–39 to 1946–47.

F.A.Q. STANDARD WEIGHT OF A BUSHEL OF WHEAT.

Year.	New South Wales.	Victoria.	South Australia.	Western Australia.
	lb.	lb.	lb.	lb.
1938–39	64½	64½	64½	63¾
1939–40	63¼	63½	64	63½
1940–41	62¾	64¼	63½	63½
1941–42	64	63¾	62½	62¾
1942–43	63	64¼	63	62½
1943–44	64¼	65	64	61¾
1944–45	63	63½	63	63
1945–46	63½	62½	61½	63½
1946–47	62½	63½	61½	63

9. **Price of Wheat.**—The collapse in the price of wheat which occurred between 1928 and 1931 was chiefly due to the accumulation of stocks in exporting countries. The weighted average price of wheat (shippers' limits f.o.r. ports Sydney, Melbourne and Adelaide) fell from 5s. 1¼d. in 1928 to 2s. 4¾d. in 1931, a decline of 53 per cent. Subsequent to 1931, prices fluctuated between 2s. 6d. and 3s. per bushel until 1936, when an upward movement coincided with the depletion of excess stocks following crop failures in North America. By December, 1936, prices exceeded 5s. per bushel and remained at that level during 1937. By the end of 1938 world exportable surpluses had again accumulated and prices receded to 2s. 1d. per bushel by August, 1939, the lowest level recorded in Australia.

On 21st September, 1939 the Australian Wheat Board was appointed under war-time legislation and the price of wheat for export or local consumption is determined by that authority. In consequence, the open market for wheat ceased and therefore a price comparison on a pre-war basis is no longer possible. The following table shows the price of wheat in Australia for the periods indicated. The price stated for 1940 and subsequent years represents the approximate average price of wheat exported during those years.

PRICE OF WHEAT: AUSTRALIA.

(WEIGHTED AVERAGE OF SHIPPERS' LIMITS FOR GROWERS' BAGGED AND BULK LOTS, SYDNEY, MELBOURNE AND ADELAIDE.)

Item.	1939. (*a*)	1942. (*b*)	1943. (*b*)	1944. (*b*)	1945.	1946. (*b*)
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Price per bushel	2 4	4 2	4 3¾	5 4	(*c*)	10 10$\frac{9}{10}$

(*a*) Average for eight months ended August. (*b*) Approximate export price. (*c*) Not available. The export wheat price for January and February, 1945 averaged 6s. 5d., and for December, 1945, averaged 9s. 8d. There were no sales for the other nine months of the year.

10. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the seasons 1944–45 and 1945–46 is shown below. The values are on a gross basis at the principal market in each State and are based upon payments made to producers. Pending the finalizing of the accounts of the Australian Wheat Board these values are subject to revision.

WHEAT FOR GRAIN: VALUE OF CROP,(a) 1944–45 and 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
1944–45.	£	£	£	£	£	£	£	£
Aggregate value..	5,125,710	1,931,484	1,494,605	4,874,042	3,963,936	18,530	506	17,408,813
Value per acre ..	£1/16/0	£0/18/0	£4/0/11	£3/0/1	£2/12/4	£1/10/9	£3/6/10	£2/1/2
1945–46.	£	£	£	£	£	£	£	£
Aggregate value..	20,419,830	9,913,133	2,254,560	7,391,004	6,525,456	15,530	11,264	46,530,777
Value per acre ..	£5/8/3	£3/1/0	£5/14/11	£3/8/3	£3/11/1	£3/2/4	£6/3/7	£4/1/5

(a) Gross value of total crop, including drought relief and also seed used on farm, but excluding value of straw.

11. **Consumption of Wheat in Australia.**—The estimated annual consumption of wheat for food and the quantity used for seed in Australia during the five years 1941–42 to 1945–46 were as follows:—

AVERAGE ANNUAL HUMAN CONSUMPTION, 1941–42 to 1945–46.

Flour milled		1,222,552 tons
Less net exports of flour	489,456 tons	
Less net exports of flour in biscuits ..	10,174 ,,	
		499,630 ,,
		722,922 ,,
Change in flour stocks		4,688 ,,
Net quantity consumed		727,610 ,,
Equivalent in terms of wheat		34,925,000 bushels
Net quantity consumed per head of population—		
As flour		(a) 224.3 lb.
Equivalent in terms of wheat		(a) 4.8 bushels

AVERAGE ANNUAL QUANTITY USED FOR SEED, 1941–42 to 1945–46.

Average area sown for grain, hay and green forage ..	10,880,626 acres
Average quantity of seed used	10,510,114 bushels
Average quantity of seed used per acre	58 lb.
Average quantity of seed used per head of population ..	(a) 1.45 bushels

(a) Subject to revision.

In addition to the foregoing, allowance must be made for wheat fed to poultry and other live-stock. The average quantity so used for the five years ended 1945–46 is estimated at 35,873,931 bushels or 4.93 bushels per head of population. Because of the accumulation of wheat due to war-time shipping difficulties, the use of wheat as a stock fodder was encouraged. The objective was to obtain a greater output of eggs and pig meat to meet the increasing demands by the armed services and civilians. For this purpose the Commonwealth Government provided a subsidy of 8d. per bushel for wheat sold for fodder purposes.

Following the disastrous drought of 1944–45, however, the surpluses accumulated in earlier years had disappeared by the end of November, 1945. As a result, the quantities available as stock feed have been restricted in order to make greater quantities available for exports to meet urgent needs of the war-stricken areas of Europe and Asia.

Grain used for seed has been estimated on the basis of data collected from growers or from estimates supplied by the Departments of Agriculture. The average annual quantity used for seed during the five years ended 1945–46 was 1.45 bushels per head of population, or 58 lb. per acre sown.

The consumption of wheat in Australia for all purposes (human consumption, live-stock and seed) during the five years ended 1945–46 averaged 81,309,325 bushels, or 11.2 bushels per head of population.

12. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the cereal years ended 30th November, 1943 to 1948. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 see graph, p. 898.)

WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

(Million bushels).

Particulars.	Year ended 30th November—					
	1943.	1944.	1945.	1946.	1947.	1948.
Opening stocks (including flour as wheat)	104.5	154.0	77.9	11.5	20.2	13.5
Production	155.7	109.7	52.9	142.4	117.3	220.1
Total Available Supplies ..	260.2	263.7	130.8	153.9	137.5	233.6
Exports—						
Wheat	18.6	54.3	6.1	19.4	12.0	87.0
Flour as wheat	18.6	36.9	12.9	37.7	34.0	44.6
Local Consumption—						
Flour as wheat	34.3	34.5	33.1	32.2	33.5	33.6
Stock feed	20.3	40.7	44.9	24.4	22.2	20.7
Breakfast foods and other uses ..	1.0	3.2	3.1	3.0	4.2	4.2
Seed..	8.3	9.0	12.0	13.2	13.8	13.2
Balance retained on farm (excluding seed)	5.1	7.2	7.2	3.8	4.3	3.9
Closing stocks (including flour as wheat)	154.0	77.9	11.5	20.2	13.5	26.4
Total Disposals	260.2	263.7	130.8	153.9	137.5	233.6

13. **Exports of Wheat and Flour.**—(i) *Quantities.* The following table shows the exports and net exports of wheat and flour for each of the years 1938–39 and 1942–43 to 1946–47. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900 ; in 1902–3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914–15 to supplement the yield of 25 million bushels produced in that season. During

the five years ended 1946–47 exports in terms of wheat averaged 49,300,000 bushels compared with 97,932,000 bushels in 1938–39, the net exports for the period averaging 49,188,000 bushels :—

WHEAT AND FLOUR: EXPORTS FROM AUSTRALIA.

Year.	Exports.			Net Exports.
	Wheat.	Flour.	Total.	
	'000 Bushels.	'000 Eq. Bushels.(a)	'000 Bushels.	'000 Bushels.
1938–39 ..	63,129	34,803	97,932	97,931
1942–43 ..	22,544	16,402	38,946	38,928
1943–44 ..	33,658	28,346	62,004	62,004
1944–45 ..	32,391	26,868	59,259	59,259
1945–46 ..	12,484	24,906	37,390	36,848
1946–47 ..	12,176	36,725	48,901	48,901

(a) Wheat equivalent in bushels of wheat.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for 1938–39 and each of the four years ended 1946–47, and the average for the five years ended 1938–39.

WHEAT: EXPORTS FROM AUSTRALIA.

('000 omitted).

Country to which Exported.	Average Five Years ended 1938–39.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom	45,195	32,235	321	..	..	..
Ceylon	134	138	2,435	344	659	..
India	1,662	6,922	8,404	15,626	9,123	6,692
New Zealand	1,537	3,096	2,834	2,486	944	4,332
Rhodesia..	1	..	81	342	331	868
Union of South Africa ..	602	1,706	813	276	286	38
Other British Countries ..	3,850	2,949	4,145	632	3	237
Belgium	756	324	..	..	..	..
China	6,151	10,621	..	..	639	
Egypt	503	389	3,705	..	..	
France	939	..	..	..	..	
Germany..	235	376	..	..		
Italy	3,152	..	5,636	5,600	..	..
Japan	6,471	431	..	..	..	..
Other Foreign Countries ..	5,285	3,942	5,284	7,085	499	9
Total	76,473	63,129	33,658	32,391	12,484	12,176

(*b*) *Flour.* The following table shows the exports of flour to various countries for 1938–39 and each of the four years ended 1946–47, and the average for the five years ended 1938–39 :—

FLOUR : EXPORTS FROM AUSTRALIA.

(In tons of 2,000 lb.)

Country to which Exported.	Average Five Years ended 1938–39.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
United Kingdom	142,912	118,957	..	32,995	3,267	99,953
Ceylon	16,915	18,147	315,506	229,995	152,040	171,191
Hong Kong	44,966	23,040	..	..	28,231	33.050
India	2,732	591	28,698	84,105	95,115	49,581
Malaya (British)	63.309	66,965	..	..	117,749	194,036
Mauritius	54,960	13,525	40,709	42,470	22,969	42,243
New Zealand	3,187	554	137	3,570	16,183	17,047
Union of South Africa ..	306	132	258	1,585	2,556	9,024
Other British Countries ..	6,190	71,824	117.361	35,869	49,823	33,301
China	50,460	216,878	..	..	..	39,192
Egypt	24,284	17,153	56,880	84,807	149	37,545
French Dependencies—						
Indo-China	24,810	6,995	..	..	3,619	11,227
Society Islands	16,731	3,844	5,648	5,208	4,001	6,751
Other Foreign Countries ..	195,311	166,460	25,347	39,145	23,174	20,957
Total	647,073	725,065	590,544	559,749	518,876	765,098

14. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November in each year 1939 and 1943 to 1947, and the total in terms of wheat are shown in the following table. The source of these data is the Australian Wheat Board, but, in order to maintain comparability with pre-war figures, adjustments have been made where possible to allow for stocks estimated to be held by merchants, bakers and farmers.

WHEAT AND FLOUR : STOCKS AT 30th NOVEMBER. (*a*)

30th November.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			Wheat (bushels).				
1939	5,059,320	3,435,783	304,199	5,139,508	2,114,766	162,251	16,215,827
1943	24,862,000	37,943,000	307,000	47,200,000	38,942,000	505,000	149,759,000
1944	17,662,000	18,274,000	278,000	19,858,000	17,297,000	378,000	73,747,000
1945	695,000	1,848,000	175,000	900,000	2,191,000	238,000	6,047,000
1946	10,510,000	1,994,000	751,000	940,000	884,000	62,000	15,141,000
1947(*b*)	1,571,000	3,735,000	372,000	1,715,000	766,000	217,000	8,376,000
			Flour (tons of 2,000 lb.).				
1939	34,875	27,350	5,292	21,479	8,592	1,695	99,283
1943	20,764	39.007	5,948	15,600	5,972	1,492	88,783
1944	29,747	22,614	3,578	11,300	18,418	385	86,042
1945	28,895	25,664	3,674	42,000	12,419	987	113,639
1946	28,000	35.997	5,521	20,000	15,287	726	105,531
1947(*b*)	30,244	47,242	4,001	9,400	15,132	1,089	107,108
			Total in terms of wheat (bushels).				
1939	6,733,320	4,748,584	558,215	6,170,500	2,527,182	243,611	20,981,412
1943	25,858,672	39,815,344	592,504	47,948,800	39,228,656	576,616	154,020,592
1944	19,089,856	19,359,472	449,744	20,400,400	18,181,064	396,480	77,877,016
1945	2,081,960	3,079,872	351,352	2,916,000	2,787,112	285,376	11,501,672
1946	11,854,000	3,721,856	1,016,008	1,900,000	1,617,776	96,848	20,206,488
1947(*b*)	3,022,712	6,002,616	564,048	2,166,200	1,492,336	269,272	13,517,184

(*a*) One ton of flour treated is equivalent to 48 bushels of wheat. (*b*) Subject to slight revision.

15. **Flour Milling.**—Particulars of the grain-milling industry are given in some detail in Chapter XXIV. "Manufacturing Industry". The following table summarizes the operation of flour mills in Australia for the years 1938–39 and 1942–43 to 1945–46.

OPERATIONS OF FLOUR MILLS: AUSTRALIA.

Particulars.	Unit.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46
Number of mills	No.	172	159	167	168	170
Number of persons employed	,,	3,783	3,343	3,993	4,175	4,099
Wheat milled	'000 bus.	66,999	51,169	69,559	75,210	63,191
Output of Flour	,, tons	1,373	995	1,358	1,413	1,219
,, ,, Bran	,, ,,	289	199	278	280	238
,, ,, Pollard . .	,, ,,	284	210	280	286	256
,, ,, Wheatmeal . .	,, ,,	29	83	83	109	83

16. **Voluntary Wheat Pools.**—Details of voluntary wheat pools operating in Australia are given in issues of the Official Year Book prior to No. 33, 1940. These pools ceased to function when the Australian Wheat Board was created in September, 1939.

17. **War-time Marketing of Wheat.**—(i) *General.* At the outbreak of war in September, 1939, the wheat industry of Australia was experiencing a period of low prices. The price of wheat had fallen to 2s. 1d. per bushel in August, 1939, compared with 3s. 1d. in August, 1938, 5s. 1d. in August, 1937, and 2s. 2d. per bushel in the same month of 1931, the lowest monthly quotation during the economic depression of that period.

Apart from low prices, other difficulties created by war conditions were those of marketing and transport. There was also a large accumulation of surplus stocks in the chief exporting countries of the world and this, combined with the natural disability of Australia's remoteness from the main centres of consumption, was another factor adding to a most difficult position.

In view of these circumstances, the Commonwealth Government, under the Wheat Acquisition Regulations, constituted the Australian Wheat Board on the 21st September, 1939 to acquire, with certain exceptions, all wheat held in Australia. The harvest of 1939–40 was also acquired by notification published on 16th November, 1939.

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations the Board was empowered, subject to directions of the Minister for Commerce and Agriculture, to purchase, sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc., of wheat acquired, and such other matters necessary to give effect to the regulations under which it was created.

(iii) *Wheat Acquired and Disposed of.* (*a*) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board up to 30th November, 1947 are shown in the following table :—

AUSTRALIAN WHEAT BOARD: WHEAT ACQUIRED TO 30th NOVEMBER, 1947.

('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
1	1938–39*a*	6,226	2,805	. .	5,884	2,925	. .	17,840
2 and 3 . .	1939–40	66,688	46,960	6,255	38,130	37,370	41	195,444
4	1940–41	16,919	9,985	5,287	13,818	17,575	75	63,659
5	1941–42	41,235	48,135	2,680	27,738	34,078	78	153,944
6	1942–43	44,709	40,213	4,403	34,660	17,983	22	141,990
7	1943–44	40,880	17,227	4,599	18,141	13,853	57	94,757
8	1944–45	12,167	941	5,837	6,758	13,079	39	38,821
9	1945–46	54,889	25,621	7,492	18,161	17,742	23	123,928
10	1946–47	8,635	44,481	444	24,818	20,521	68	98,967
Total to 30th November, 1947.		292,348	236,368	36,997	188,108	175,126	403	929,350

(*a*) Balance only.

(*b*) *Wheat Disposal.* Details relating to the disposal of this wheat are shown in the following table :—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT TO 30th NOVEMBER, 1947.

('000 Bushels.)

Particulars.	To 31st December, 1942.	1943.	1944.	1945.	1946.	1947.	Total to 30th November, 1947.
Sold for export as wheat ..	119,641	20,053	54,619	2,742	19,820	13,314	230,189
Sold for export as flour ..	76,853	20,159	37,648	14,897	37,487	34,927	221,971
Sold for local consumption as flour	100,873	34,872	33,886	33,373	32,204	30,833	266,041
Sold for all other purposes ..	38,731	20,919	46,969	45,104	26,283	25,071	203,077

Owing to war-time conditions, a great proportion of the sales of wheat and flour for export was made up of large quantities to the British Government. To 30th November, 1947, the Board had shipped a total of 230,189,000 bushels of wheat, and, in addition, had sold on its own account (i.e., not including millers' shipments), 221,971,000 bushels for export as flour, equivalent to a shipment of approximately 4,625,000 short tons of flour.

(iv) *Finance.* Under the terms of the Wheat Acquisition Regulations, the Minister is empowered to arrange with the Commonwealth Bank for advances to the Board. These advances are guaranteed by the Commonwealth Government.

AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS TO 30th NOVEMBER, 1947.

Particulars.	No. 5 Pool. (*a*)	No. 6 Pool. (*a*)	No. 7 Pool. (*a*)	No. 8 Pool. (*a*)	No. 9 Pool. (*b*)	No. 10 Pool. (*b*)
	£	£	£	£	£	£
Paid to growers	27,119,734	29,883,649	23,795,653	8,843,681	37,008,579	31,249,556
Rail freight	2,948,026	2,723,082	1,881,808	758,564	2,480,056	1,800,000
Expenses	3,676,160	3,882,109	2,862,250	1,103,715	1,985,248	1,907,170
Total Payments ..	33,743,920	36,488,840	28,539,711	10,705,960	*c*48,458,948	*d*38,778,648
Value of sales delivered ..	32,650,577	35,361,557	26,651,903	8,842,989	47,747,657	38,975,061
Value of flour tax	1,093,343	1,127,283	1,887,808	1,862,971	760,248	1,550,000

(*a*) Complete. (*b*) Incomplete. (*c*) Includes £6,985,065 (collected under Wheat Export Charge Act 1946) which was distributed to growers during 1948. (*d*) Includes £3,821,922 collected under Wheat Export Charge Act 1946 which was distributed to growers early in 1949. Details of earlier pools will be found in Official Year Book No. 36, p. 798.

(v) *Advances to Growers.* (*a*) *Pools Nos.* 5 *to* 7. The advances made to growers to 30th November, 1947 in each of pools Nos. 5 to 7 are shown in the following table :—

WHEAT POOLS Nos. 5 TO 7 : ADVANCES MADE TO GROWERS TO 30th NOVEMBER, 1947.

Particulars.	Amount Paid. (Trucks Terminal Port Basis).									
	No. 5 Pool.(*a*)		No. 6 Pool.(*b*)				No. 7 Pool.(*b*)			
			Per Bushel.		Total.		Per Bushel.		Total.	
	Per Bushel	Total.	Quota.	Non-Quota.	Quota.	Non-Quota.	Quota.	Non-Quota.	Quota.	Non-Quota.
	s. d.	£'000.	*s. d.*	*s. d.*	£'000.	£'000	*s. d.*	*s. d.*	£'000.	£'000.
Advances made to Growers—										
1st Payment—										
Bulk ..	2 10	22,429	3 10	1 10	19,484	4,083	3 11⅓	1 11⅓	15,676	1,712
Bagged ..	3 0		4 0	2 0			4 1⅓	2 1⅓		
2nd Payment—										
Bulk ..	0 3	1,924	0 6½	1 0	2,904	2,126	1 0	1 0	3,973	845
Bagged ..	0 3		0 7½	1 0			1 0½	1 0		
3rd Payment—										
Bulk ..	0 4	2,566	0 1	0 6	414	1,063	0 3.9	0 7	1,265	493
Bagged ..	0 4		0 1	0 6			0 3.9	0 7		
4th Payment—										
Bulk ..	0 3	1,924	..	0 5	..	886	0 0½	0 5	162	352
Bagged ..	0 3		..	0 5			0 0½	0 5		
5th Payment—										
Bulk ..	0 1⅛	1,187	..	0 8½	..	1,598	..	1 0	..	862
Bagged ..	0 2⅝		..	0 9½				1 0½		
6th Payment—										
Bulk ..	..	..	..	..	..	..	..	0 3.9	..	275
Bagged ..	..	..	..	..	..	..	..	0 3.9		
7th Payment—										
Bulk ..	..	..	..	..	..	..	..	0 0½	..	35
Bagged ..	..	..	..	..	..	..	..	0 0½		
Total—										
Bulk ..	3 9⅛	30,030	4 5½	4 5½	22,802	9,756	5 3.73	5 3.73	21,076	4.574
Bagged ..	4 0⅝		4 8½	4 8½			5 6.23	5 6.23		

(*a*) Rail freight was deducted from 1st payment. (*b*) Rail freight was deducted from 2nd payment in respect of quota, and 5th payment in respect of non-quota wheat.

(*b*) *Pools Nos.* 8 *to* 10. The Wheat Acquisition Regulations, 1939 provide that the Minister for Commerce and Agriculture shall determine the compensation to be paid for wheat acquired by the Commonwealth. During the seasons 1939–40 to 1941–42 an initial payment of compensation was made as wheat was acquired and further payments were made as the realization of the various pools progressed. In August, 1942 the Government gave approval to the proposal to guarantee to wheat-growers compensation at a fixed rate on the first 3,000 bushels delivered by each grower (known as quota wheat), while on the remainder of deliveries (non-quota) compensation at a lower rate would be paid as the wheat was acquired and further payments made as warranted by realizations.

A quota was allotted to each wheat-grower by the Wheat Industry Stabilization Board, and, on the wheat delivered by him to the extent of his quota, the grower received the guaranteed payment.

The quota allotted to the majority of wheat-growers was for 3,000 bushels but, in certain instances, growers who operated under a share farming agreement, either as owners or share farmers, or who farmed under family arrangements, received a quota of less than 3,000 bushels.

For the 1942–43 season (No. 6 Pool) the guarantee at country stations was 4s. per bushel for bagged wheat and 3s. 10d. for bulk wheat, while deliveries in excess of quota received an initial payment of 2s. per bushel for bagged wheat and 1s. 10d. per bushel for bulk wheat. Since then, additional payments of compensation on non-quota wheat have been made.

Payment of initial compensation on wheat acquired for the 1943–44 season (No. 7 Pool) was on the same basis, although the payment on both quota and non-quota wheat was increased by 1⅓d. per bushel, this amount being the estimated increased cost for harvesting the 1943–44 crop due to the introduction of an industrial award for labour employed for this purpose.

For the 1944–45 season (No. 8 Pool) the initial compensation for quota wheat was the same as for the previous season while for non-quota wheat it was 10⅔d. per bushel more than that for the previous year.

In respect of 1945–46 and 1946–47 seasons (Nos. 9 and 10 Pools) the quota system was dispensed with, the initial payment made in each case being 4s. 1d. per bushel for bulk wheat and 4s. 4d. per bushel for bagged wheat.

For the 1947–48 season (No. 11 Pool) initial compensation was fixed at 4s. 6d. per bushel for bulk and 5s. per bushel for bagged wheat.

The advances made to growers to 30th November, 1947 in the 1944–45, 1945–46 and 1946–47 seasons were as follows :—

WHEAT POOLS Nos. 8 TO 10 : ADVANCES MADE TO GROWERS TO 30th NOVEMBER, 1947.

Particulars.	Amount Paid (Trucks Terminal Port Basis).							
	No. 8 Pool.(*a*)				No. 9 Pool.(*b*)		No. 10 Pool.(*b*)	
	Per Bushel.		Total.		Per Bushel.	Total.	Per Bushel.	Total.
	Quota.	Non-Quota.	Quota.	Non-Quota.				
	s. d.	s. d.	£'000.	£'000.	s. d.	£'000.	s. d.	£'000.
Advances made to Growers—								
1st Payment—								
Bulk ..	3 11⅓	2 10	6,605	877	4 1	26,044	4 1	20,649
Bagged ..	4 1⅓	3 0			4 4		4 4	
2nd Payment—								
Bulk ..	0 9	0 9	1,297	225	1 0	6,195	1 6	7,416
Bagged ..	0 10	0 9			1 0		1 6	
3rd Payment—								
Bulk ..	0 1½	0 4⅓	205	109	0 6	3,097	1 0	4,930
Bagged ..	0 1½	0 4⅓			0 6		1 0	
4th Payment—								
Bulk ..	..	0 9	..	238	0 6	3,096	..	
Bagged ..	..	0 10			0 6			
5th Payment—								
Bulk ..	..	0 1½	..	38	0 1¾	1,026	..	.
Bagged ..	..	0 1½			0 2¼			
Total—								
Bulk ..	4 9.83	4 9.83	8,107	1,487	6 2¾	39,458	6 7	32,995
Bagged ..	5 0.83	5 0.83			6 6¼		6 10	

(*a*) Rail freight was deducted from 2nd payment in respect of quota, and 4th payment in respect of non-quota wheat. (*b*) Rail freight was deducted from 2nd payment.

18. **Special Tabulation of Wheat Holdings.**—With the co-operation of the State Statisticians an extensive analysis was made of the returns collected at the annual agricultural census of 1935–36 in respect of all holdings growing wheat for grain in the principal producing States. The results are published in the Official Year Book No. 33, pp. 374 to 377.

19. **World Area and Production of Wheat.**—The details in the following table of the world area and production of wheat by countries and continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following. Figures in parenthesis are Office of Foreign Agricultural Relations estimates based on foreign service reports and other information.

WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

Continent and Country.	Area.(*a*)			Production.			Yield per acre.		
	Average—		1945. (*e*)	Average—		1945. (*e*)	Average—		1945 (*e*)
	1930–34.	1935–39.		1930–34.	1935–39.		1930–1934.	1935–1939.	
	'000. acres.	'000. acres.	'000. acres.	'000. bushels.	'000. bushels.	'000. bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,682	25,595	23,414	348,560	312,399	305,912	13.6	12.2	13.1
Mexico ..	1,237	1,244	1,237	14,364	14,282	13,651	11.6	11.5	11.0
United States	54,193	57,293	64,740	732,527	758,623	1,123,143	13.5	13.2	17.3
Total (*c*) ..	81,150	84,150	89,500	1,096,000	1,086,000	1,445,000	..		.
Europe—									
Austria ..	535	(*d*) 616	(*b*)	12,626	*d* 15,117	(*b*)	23.6	*d*24.5	(*b*)
Belgium ..	384	402	414	14,726	16,150	(14,500)	38.3	40.2	35.0
Bulgaria ..	3,078	3,080	3,102	52,864	64,228	41,818	17.2	20.9	13.5
Czechoslovakia	2,129	(*d*) 2,220	(*b*)	53,697	*d* 59,090	(*b*)	25.2	*d*26.6	(*b*)
Denmark ..	259	316	215	11,131	14,358	10,288	43.0	45.4	47.9
Eire ..	43	225	662	1,698	7,689	(21,000)	39.5	34.2	31.7
France ..	13,280	(*d*) 12,721	(9,390)	305,318	*d* 292,568	(184,000)	23.0	*d*23.0	19.6
Germany ..	5,310	(*d*) 5,074	(*b*)	170,212	*d* 176,654	(*b*)	32.1	*d*34.8	(*b*)
Greece ..	1,612	2,150	(1,640)	18,414	30,205	(16,800)	11.4	14.0	10.2
Hungary ..	3,943	4,091	(*b*)	76,506	*d* 91,210	(*b*)	19.4	*d*22.3	(*b*)
Italy ..	12,089	12,635	11,070	252,604	279,519	154,542	20.9	22.1	14.0
Netherlands ..	267	338	295	11,802	15,209	10,288	44.2	45.0	34.9
Poland ..	4,280	4,303	(*b*)	74,267	77,245	(*b*)	17.4	18.0	(*b*)
Portugal ..	1,321	1,227	1,359	18,359	16,066	10,472	14.0	13.1	7.7
Rumania ..	7,703	9,053	(*b*)	103,417	140,816	(*b*)	13.4	15.6	(*b*)
Spain ..	11,236	10,220	8,896	158,081	*d* 113,905	(72,000)	14.1	*d*11.1	8.2
Sweden ..	697	740	731	23,214	26,351	23,255	33.3	35.6	31.8
United Kingdom ..	1,522	1,843	2,279	51,176	62,361	79,333	33.6	33.8	34.8
Yugoslavia ..	5,098	5,349	(*b*)	79,194	96,750	(34,000)	15.6	18.1	(*b*)
Total (*c*)	76,033	78,313	61,800	1,516,000	1,632,000	1,035,000	..	..	..
Soviet Union (*c*)	85,798	98,764	(*b*)	*f* 860,448	1,050,000	(*b*)	10.0	10.6	(*b*)
Africa—									
Algeria ..	3,893	4,184	3,170	32,571	35,201	11,023	8.4	8.4	3.5
Egypt ..	1,560	1,461	1,710	43,128	45,848	43,436	27.6	31.3	25.4
French Morocco	2,887	3,251	2,280	29,509	23,198	5,747	10.2	7.1	2.5
Tunisia ..	1,995	1,902	1,965	12,956	14,965	6,352	6.5	7.9	3.2
Union of South Africa (*g*) ..	1,516	1,926	(2,400)	12,301	16,259	10,220	8.1	8.4	4.3
Total (*c*)	12,630	13,720	12,800	135,000	142,000	85,000	..	..	..

See footnotes on next page.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—*continued.*

Continent and Country.	Area.(*a*)			Production.			Yield per acre.		
	Average—			Average—			Average—		
	1930–34.	1935–39.	1945. (*e*)	1930–34.	1935–39.	1945. (*e*)	1930–1934.	1935–1939.	1945. (*e*)
	’000. acres.	’000. acres.	’000. acres.	’000. bushels.	’000. bushels.	’000. bushels.	bus.	bus.	bus.
Asia—									
China ..	(*d*) 49,106	(*d*) 48,120	(*b*)	*l* 820,624	*d* 175,536	(*b*)	*l* 16.7	*d* 14.9	(*b*)
Korea ..	809	832	(*b*)	9,048	10,240	(*b*)	11.2	12.3	(*b*)
India ..	33,340	34,492	35,709	355,593	370,660	390,132	10.7	10.7	10.9
Japan ..	1,356	1,738	(*b*)	36,800	50,133	(*b*)	27.1	28.8	(*b*)
Manchuria ..	3,301	2,903	(*b*)	40,770	35,200	(*b*)	12.4	12.1	(*b*)
Syria and Lebanon ..	1,245	1,363	(2,100)	14,638	19,185	(21,000)	11.8	14.3	10.0
Turkey ..	7,023	8,952	(10,600)	94,796	135,690	82,158	13.5	15.2	7.8
Total(*c*)	102,300	105,900	110,000	1,456,000	1,442,000	1,480,000	..	..	..
South America—									
Argentine ..	17,709	15,834	10,030	243,932	221,769	149,545	13.8	14.0	14.9
Chile ..	1,763	1,963	1,803	27,355	35,562	32,358	15.5	16.1	17.9
Uruguay ..	1,055	1,210	929	9,876	13,256	9,370	9.4	11.0	10.1
Total (*c*) ..	21,800	20,500	14,300	295,000	280,000	205,000	..	..	
Oceania—									
Australia ..	15,223	12,980	11,425	185,773	154,325	142,410	12.2	11.9	12.5
New Zealand	266	221	163	8,037	7,129	5,401	30.2	32.3	33.1
Total ..	15,489	13,201	11,588	193,810	161,454	147,811	..	..	
World Total(*c*)	395,213	414,703	382,000	5,553,000	5,810,000	5,200,000	..	..	
Totals—									
Northern Hemisphere(*c*)	356,507	378,866	354,016	5,051,164	5,351,186	4,839,280	14.2	14.1	13.7
Southern Hemisphere(*c*)	38,706	35,837	27,984	501,836	458,814	360,720	13.0	12.8	12.9
World Total(*c*)	395,213	414,703	382,000	5,553,000	5,810,000	5,200,000	..		

(*a*) The figures of areas are, as far as possible, those of areas harvested. (*b*) Not available. (*c*) Estimated total including the area and production of countries whose particulars are not shown separately. (*d*) Average of less than five years (*e*) Preliminary. Subject to revision. (*f*) Production estimates for the Soviet Union for the years 1933 and 1934 have been reduced 15 per cent. to take account of heavy harvesting losses. (*g*) Excludes native cultivation.

20. **Exports—Principal Countries.**—The following table shows the latest available statistics of net quantities of wheat exported from the chief exporting countries compared with the period from 1909 to 1913. In the years before the 1914–18 War the U.S.S.R. (Russia) was the outstanding contributor to the world's supply of wheat, followed by the United States of America. Owing to increased demands within their own borders, however, the net exports from U.S.S.R. have since become relatively unimportant, while those from the United States of America have become generally less important. The latter country had a net import of 89 million bushels in 1944, but was second principal wheat exporter in 1945. Canada now occupies the foremost position with Argentine and Australia usually coming next in order.

Although Australia's production of wheat is in normal times little more than 3 per cent. of the world's total, its exports represent between 15 and 20 per cent. of the quantities shipped and as an exporting country Australia, up to 1938, had made the greatest relative advance since 1913. During 1944 and 1945, however, Canada's net exports constituted 62 per cent. and 58 per cent. respectively of total world net exports.

WHEAT (*a*) : NET EXPORTS, PRINCIPAL COUNTRIES.(*b*)

Country.	Average 1909–13.		Average 1934–38.		1944.	1945.
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	'000 Bushels.
U.S.S.R (Russia) ..	157,109	23.71	22,520	4.04	(*c*)	(*c*)
U.S.A.	100,864	15.22	43,648	7.83	—88,633	165,220
Argentine	95,041	14.34	122,739	22.01	96,329	95,396
Canada	89,919	13.57	175,407	31.45	351,733	389,341
British India ..	50,886	7.68	8,877	1.59	—11,113	(*c*)
Australia	49,417	7.46	102,695	18.41	87,361	14,701
All Other Countries ..	119,351	18.02	81,839	14.67	134,231	7,408
Total ..	662,587	100.00	557,725	100.00	569,908	672,066
World's Production ..	3,779,479		5,083,344		5,650,000	5,200,000
Percentage of Australian Net Exports on Total Net Exports	7.46		18.41		15.33	2.19
Percentage of Australian Production on World's Production	2.39		3.02		0.92	2.74

(*a*) Includes flour expressed in terms of wheat. (*b*) In some instances the average for 1909–13 is not strictly comparable with the later years shown, owing to changes of frontiers. (*c*) Not available.

NOTE.—Minus (—) sign denotes net imports.

21. **Imports—Principal Countries.**—The quantities of wheat and flour (expressed in terms of wheat) imported into the principal countries for the periods indicated are shown in the following table :—

WHEAT (*a*) : IMPORTS, PRINCIPAL COUNTRIES.(*b*)

Country Importing.	Average 1909–13.		Average 1934–38.		1944.	1945.
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	'000 Bushels.
United Kingdom ..	219,365	30.42	208,749	33.80	144,818	159,558
Germany ..	89,732	12.44	25,606	4.15	(*c*) 14,282	(*d*)
Netherlands ..	76,340	10.59	22,584	3.66	(*d*)	(*d*)
Belgium	73,963	10.26	42,856	6.94	1,715	28,855
Italy	57,156	7.93	25,891	4.19	(*d*)	(*d*)
France	38,682	5.36	23,767	3.85	185	24,471
Brazil	20,774	2.88	29,812	4.83	47,695	47,004
Egypt	7,915	1.10	586	0.09	52	5,577
Union of South Africa	6,519	0.90	753	0.12	780	4,200
China (*e*)	5,526	0.77	27,471	4.45	488	(*d*)
Japan	3,714	0.52	11,551	1.87	..	..
All Other	121,409	16.83	198,051	32.05	319,314	319,894
Total ..	721,095	100.00	617,677	100.00	529,329	589,559

(*a*) Includes flour expressed in terms of wheat. (*b*) In some instances the average 1909–13 is not strictly comparable with the other years shown, owing to changes of frontiers. (*c*) First half-year only. (*d*) Not available. (*e*) Includes Manchurian ports.

§ 5. Oats.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1945–46 accounted for 55.94 per cent., oats grown for grain represented only 9.54 per cent. of the area of crops, being less than hay. The acreage and production of oats for the years 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown in the following table :—

OATS FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
				AREA ('000 ACRES).				
Average 10 seasons ended 1938–39 ..	229	478	5	282	369	30	..	1,393
1938–39.. ..	399	658	9	267	426	25	..	1,784
1942–43.. ..	431	428	19	263	343	13	..	1,497
1943–44.. ..	374	426	22	225	358	10	..	1,415
1944–45.. ..	544	722	17	334	402	15	..	2,034
1945–46.. ..	617	511	40	370	396	14	1	1,949
Average 10 seasons ended 1945–46 ..	380	494	15	332	406	20	1	1,648
				PRODUCTION ('000 BUSHELS).				
Average 10 seasons ended 1938–39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1938–39.. ..	4,831	2,909	93	2,401	4,668	645	7	15,554
1942–43.. ..	7,338	6,638	277	3,365	3,612	292	10	21,532
1943–44.. ..	7,051	3,705	389	2,294	3,964	299	10	17,712
1944–45.. ..	1,757	1,335	296	1,316	3,845	420	1	8,970
1945–46.. ..	9,997	7,402	830	3,178	4,081	281	5	25,774
Average 10 seasons ended 1945–46 ..	5,136	5,248	233	2,757	4,185	551	6	18,116

The oat crop showed considerable variation during the past decennium, ranging from 8,970,000 bushels in 1944–45 to a record yield of 25,774,000 bushels in 1945–46, with an average for the period of 18,116,000 bushels.

The principal oat-growing States are New South Wales and Victoria, which produce, on the average, more than half the total quantity grown in Australia. Western Australia and South Australia also produce considerable quantities, but in Queensland and Tasmania the output is small.

Oats are mainly used in Australia as feed grain. The quantity consumed by stock averages about 12 million bushels annually, leaving a balance of about 4 million bushels for seed purposes, about 2 million bushels for oatmeal and a small quantity for the production of spirits and for malting.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Averages for each of the seasons 1938–39, 1942–43 to 1945–46 and for the ten-year periods ended 1938–39 and 1945–46 are given in the following table :—

OATS FOR GRAIN : AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Average 10 seasons ended 1938–39 ..	15.66	12.03	12.77	7.91	10.77	28.15	22.35	11.80
1938–39	12.09	4.42	10.77	8.99	10.95	25.97	21.95	8.72
1942–43	17.01	15.51	14.49	12.81	10.55	22.19	23.20	14.38
1943–44	18.84	8.69	17.60	10.22	11.07	30.69	24.67	12.52
1944–45	3.23	1.85	17.64	3.94	9.57	28.41	2.65	4.41
1945–46	16.20	14.47	20.75	8.60	10.30	20.15	9.21	13.22
Average 10 seasons ended 1945–46 ..	13.50	10.62	15.62	8.31	10.20	27.69	15.34	10.99

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1944–45, namely, 4.41 bushels, while the largest in the last ten years was that of the season 1941–42, amounting to 15.27 bushels per acre.

2. **Price of Oats.**—The average wholesale prices in the Melbourne market for oats of good milling quality for the years 1942–43 to 1946–47 in comparison with 1938–39 are shown in the following table :—

OATS : MELBOURNE AVERAGE WHOLESALE PRICES.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	3 5½	2 9	3 3	3 9¼	3 11½	4 3¾

3. **Value of Oat Crop.**—The estimated values of the oat crop for the seasons 1944–45 and 1945–46 were as follows :—

OATS : VALUE OF CROP (*a*), 1944–45 and 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust	W. Aust.	Tas.	A.C.T	Australia
1944–45—	£	£	£	£	£	£	£	£
Aggregate value..	620,970	561,963	80,051	407,678	888,187	94,410	406	2,653,665
Value per acre ..	£1/2/3	£0/15/7	£4/15/6	£1/4/5	£2/4/2	£6/7/10	£0/18/8	£1/6/1
1945–46—	£	£	£	£	£	£	£	£
Aggregate value..	1,720,720	1,272,834	193,661	566,044	751,842	66,740	771	4,572,612
Value per acre ..	£2/15/9	£2/9/0	£4/16/10	£1/10/7	£1/17/11	£4/14/6	£1/11/3	£2/6/11

(*a*) Excludes the value of straw.

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats imported into and exported from Australia during the years 1938–39 and 1942–43 to 1946–47 are shown hereunder :—

OATS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	Bushels.	£	Bushels.	£	Bushels.	£
1938–39 ..	10,428	2,762	117,347	18,866	106,919	16,104
1942–43 ..	1,045	350	284,113	57,075	283,068	56,725
1943–44 ..	643	193	88,040	18,618	87,397	18,425
1944–45 ..	202	79	30,368	9,700	30,166	9,621
1945–46 ..	1,231,085	276,734	429,163	112,931	−801,922	−163,803
1946–47 ..	85	28	106,645	27,934	106,560	27,906

(*a*) Australian currency values.
NOTE.—Minus sign (−) denotes net imports.

The quantity of oats imported into Australia is usually not very large, although in 1945–46 imports exceeded exports by 801,922 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was in 1927–28 (by 460,581 bushels) when New Zealand was the main supplier. The principal countries to which oats were exported during pre-war years were the United Kingdom, New Zealand, Malaya (British), Ceylon, India and Mauritius. In 1945–46 and 1946–47 the principal countries of destination were Union of South Africa, China, Hong Kong, Ceylon, Belgium and India.

5. **Oatmeal, etc.**—The production in Australia of oatmeal—much of which is consumed locally—amounted in 1945–46 to 401,613 cwt., the quantity of oats used for this purpose being 2,658,922 bushels, or about 10 per cent. of the total production. Oversea trade in this and similar products is small ; the exports of oatmeal, including rolled oats, during 1945–46 and 1946–47 amounted to 68,394 cwt. and 247,599 cwt. respectively. Imports in 1945–46 were negligible, but in 1946–47 amounted to 301 cwt.

6. **World Production.**—The world's production of oats for the year 1945, as compiled by the International Institute of Agriculture, amounted to 4,240 million bushels. This quantity was harvested from 138 million acres, and represents an average yield of 30.72 bushels per acre. In comparison with this average return per acre, that of Australia for the same period (13.22 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages

in excess of 50 bushels per acre. The following table shows the world's production and average yield for the period 1935–39 and for each of the ten years ended 1945. The latter year is the latest for which particulars are available :—

OATS : WORLD PRODUCTION.

Year.	Area.	Production.	Average Yield per acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1935–1939	139	4,336	31.26
1939	141	4,400	31.21
1940	143	4,545	31.78
1941	140	4,166	29.76
1942	141	4,648	32.96
1943	135	4,115	30.48
1944	134	4,045	30.19
1945(*a*)	138	4,240	30.72

(*a*) Preliminary. Subject to revision.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1945–46 season being 228,861 acres, or 97 per cent. of the total for Australia. Of the balance, Victoria contributed 6,809 acres and Western Australia 48 acres. The climate of Tasmania is generally unsuitable for the growing of maize for grain although 11 acres were sown in this State in 1945–46. In the States mentioned the crop is also grown to a greater or lesser extent for green fodder particularly in connexion with the dairying industry.

2. **Area, Production and Average Yield.**—(i) *Area and Production.* Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 300,000 acres during the past decennium. Compared with the previous year, the area in 1945–46 decreased by 21,226 acres and was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910–11 and 1927–28 respectively.

The area and production of maize for grain in each State for the years 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are given in the following table :—

MAIZE FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average 10 seasons ended 1938–39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1938–39.. ..	122,201	18,485	183,415	37	8	..	..	324,140
1942–43.. ..	103,591	7,131	173,816	..	46	..	8	284,592
1943–44.. ..	103,237	6,598	172,722	..	105	19	..	282,681
1944–45.. ..	94,107	4,544	158,170	..	125	9	..	256,955
1945–46.. ..	92,416	6,809	136,445	..	48	11	..	235,720
Average 10 seasons ended 1945–46 ..	113,215	12,850	173 668	13	53	4	3	299,806
				PRODUCTION ('000 Bushels). (*a*)				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Average 10 seasons ended 1938–39 ..	3,072	631	3,525	..	..	..	..	7,228
1938–39.. ..	2,905	417	3,733	2	..	..	..	7,057
1942–43.. ..	2,815	271	3,798	..	1	..	..	6,885
1943–44.. ..	2,769	151	4,512	..	1	..	..	7,433
1944–45.. ..	2,437	165	3,859	..	2	..	..	6,463
1945–46.. ..	2,561	308	2,860	..	..	..	..	5,720
Average 10 seasons ended 1945–46 ..	3,021	428	3,632	..	1	..	..	7,082

(*a*) 56 lb. per bushel.

The greatest production of maize in Australia was recorded in 1910–11, when it amounted to over 13,000,000 bushels. The production in 1945–46 amounted to 5,729,000 bushels compared with 7,082,000 bushels, the average for the decennium ended 1945–46.

(ii) *Average Yield.* (*a*) *Australia.* The following table gives particulars of the average yields per acre of the maize crops of the States for the seasons 1938–39, 1942–43 to 1945–46, and for the ten year periods ended 1938–39 and 1945–46 :—

MAIZE FOR GRAIN : AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Average 10 seasons ended 1938–39 ..	26.74	34.28	21.84	29.84	10.02	..	8.48	24.53
1938–39	23.77	22.54	20.36	41.35	11.25	..	..	21.77
1942–43	27.17	38.05	21.85	..	16.24	..	6.00	24.19
1943–44	26.82	22.80	26.12	..	11.89	6.63	..	26.29
1944–45	25.90	36.39	24.40	..	12.34	14.11	..	25.15
1945–46	27.71	45.22	20.96	..	9.75	2.45	..	24.30
Average 10 seasons ended 1945–46 ..	26.66	33.30	20.91	29.07	12.95	7.18	8.88	23.62

The average for Victoria is generally amongst the highest in the world. The area however, is comparatively small and is situated in specially favourable districts. The average for New South Wales is generally higher than that for Queensland.

(*b*) *Various Countries.* The average for Australia for the past ten years was 23.62 bushels per acre. During the period 1935–39 the United States of America averaged 25.0 bushels, Argentine Republic 28.0 bushels, Rumania 16.8 bushels, and the U.S.S.R. (Russia) 18.9 bushels per acre.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market is shown in the following table :—

MAIZE : AVERAGE PRICE, MELBOURNE.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel	(*a*) 4 6½	7 4½	8 0	8 4	8 5	8 0

(*a*) Sydney.

4. **Value of Crop.**—The values of the crop for the seasons 1944–45 and 1945–46 were as follows :—

MAIZE FOR GRAIN : VALUE OF CROP, 1944–45 and 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1944–45—							
Aggregate value..	873,370	66,360	1,248,315	..	1,131	70	2,189,246
Value per acre ..	£9/5/7	£14/12/1	£7/17/10	..	£9/9/11	£7/15/6	£8/10/5
1945–46—	£	£	£	£	£	£	£
Aggregate value..	928,250	126,015	999,748	..	374	20	2,054,407
Value per acre ..	£10/0/11	£18/10/2	£7/6/7	..	£7/15/10	£1/16/4	£8/14/4

5. **Maize Products.**—Imports of cornflour into Australia are negligible. Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal countries of destination being New Zealand and the Pacific Islands. In 1945–46 2,290,372 lb., valued at £54,394 were exported, compared with an annual average of 36,761 lb., valued at £364, during the five years ended 1938–39.

6. **Oversea Imports and Exports.**—The imports of maize into Australia during the five years ended 1945–46 were negligible, averaging 2,003 bushels compared with nearly 600,000 bushels during the five years ended 1929–30. Details of imports and exports for the years 1938–39 and 1942–43 to 1946–47 are as follows :—

MAIZE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	Bushels.	£	Bushels.	£	Bushels.	£
1938–39 ..	54	55	282,018	41,489	281,964	41,434
1942–43 ..	9,305	2,377	1,418	546	−7,887	−1,831
1943–44 ..	613	1,761	5,166	2,321	4,553	560
1944–45 ..	4	1	4,682	2,237	4,678	2,236
1945–46 ..	14	154	411	899	397	745
1946–47 ..	389	957	1,468	6,147	1,079	5,190

NOTE.—Minus sign (−) denotes net imports. (*a*) Australian currency values.

7. **World Production.**—The following table furnishes particulars of the world's acreage, production and average yield per acre of maize for the latest available period, according to records published by the Food and Agriculture Organization of the United Nations :—

MAIZE : WORLD PRODUCTION.

Year.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1935–1939	216	4,725	21.88
1939	218	5,107	23.43
1940	214	5,000	23.36
1941	209	5,040	24.11
1942	210	5,250	25.00
1943	220	5,380	24.45
1944	215	5,240	24.37
1945(*a*)	215	5,050	23.49

(*a*) Preliminary. Subject to revision.

The United States of America is the most important maize-producing country in the world. Approximately 100,000,000 acres are planted there annually, and in normal seasons more than 2,000 million bushels are reaped, representing about 50 per cent. of the world's production. About 85 per cent. of the production is fed to live-stock on farms, 10 per cent. is used for human food, and only a very small fraction—less than 1 per cent.—is exported.

§ 7. Barley.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* The area sown to barley for grain has expanded considerably during the past ten years. Although a substantial decrease occurred during 1942–43 and 1943–44 the area increased again during 1944–45 and 1945–46 and the average annual area sown for the decennium ended 1945–46 amounted to 642,000 acres, compared with an average of 415,000 acres for the previous ten years. Victoria was originally the principal barley-growing State, but since 1913–14 its place has been taken by South Australia which accounted for 63 per cent. of the Australian acreage in 1945–46. Victoria was next in importance with 19 per cent.

leaving a balance of about 18 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain ; small areas are sown for hay, but more considerable quantities are cut for green forage. These, however, are not included in this section. The area and production of barley for grain in the several States for the years 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown in the following table :—

BARLEY FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
				AREA ('000 Acres.)				
Average 10 seasons ended 1938–39	11	107	8	331	31	7	..	495
1938–39 ..	14	176	14	457	75	9	..	745
1942–43 ..	14	78	8	298	50	3	..	451
1943–44 ..	20	83	13	262	61	4	..	443
1944–45 ..	28	129	15	360	76	6	..	614
1945–46 ..	29	134	21	442	66	7	..	699
Average 10 seasons ended 1945–46	19	144	11	399	63	6	..	642
				PRODUCTION ('000 Bushels). (*a*)				
Average 10 seasons ended 1938–39	173	1,976	132	5,714	371	186	1	8,553
1938–39 ..	218	1,672	246	7,541	946	208	..	10,831
1942–43 ..	223	1,274	165	6,020	533	63	..	8,278
1943–44 ..	380	1,078	250	5,057	723	95	6	7,589
1944–45 ..	122	359	319	3,185	884	159	1	5,029
1945–46 ..	496	1,744	520	7,566	666	123	2	11,117
Average 10 seasons ended 1945–46	275	2,070	217	6,873	741	165	1	10,345

(*a*) 50 lb. per bushel.

(ii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Tasmania and lowest in Western Australia. Details for each State during the seasons 1938–39, 1942–43 to 1945–46 and for the ten year periods ended 1938–39 and 1945–46 are given in the following table :—

BARLEY : YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels
Average 10 seasons ended 1938–39 ..	16.62	18.44	16.67	17.29	11.89	25.21	18.88	17.29
1938–39	15.34	9.50	17.56	16.50	12.63	23.94	..	14.54
1942–43 ..	15.61	16.36	19.00	20.20	10.78	23.04	..	18.37
1943–44	18.91	12.95	19.38	19.34	11.80	27.54	17.20	17.14
1944–45	4.33	2.79	21.01	8.85	11.61	29.42	2.90	8.19
1945–46	17.16	13.00	24.70	17.12	10.03	18.28	21.42	15.90
Average 10 seasons ended 1945–46 ..	14.20	14.41	18.91	17.24	11.81	26.73	14.08	16.13

South Australia and Victoria were the only States producing more than 1,000,000 bushels on the average during the past decade, the yields being respectively 6,873,000 and 2,070,000 bushels.

(iii) *Malting (2 Row) and Other (6 Row) Barley.* (*a*) *Season* 1945–46. In the following table details of the area sown to barley of the 2 row or malting variety and 6 row or feed variety, and production therefrom for the season 1945–46 are given by States :—

BARLEY, MALTING (2 ROW) AND OTHER (6 ROW) : AREA AND PRODUCTION, 1945-46.

('000 omitted.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Barley—								
Malting (2 Row)	19	117	15	399	37	6	..	593
Other (6 Row) ..	10	17	6	43	29	1	..	106
Total ..	29	134	21	442	66	7	..	699
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels
Barley—								
Malting (2 Row)	339	1,481	356	6,922	369	114	..	9,581
Other (6 Row) ..	157	263	164	644	297	9	2	1,536
Total ..	496	1,744	520	7,566	666	123	2	11,117

Taking Australia as a whole, about 85 per cent. of the area of barley for grain in 1945–46 was sown with malting, or 2 row, barley while the remainder consisted of 6 row, or feed varieties. The proportion, however, varied considerably in the several States. The disposal of barley during the season 1945–46 was as follows : malt works, 3,734,780 bushels ; flour and other grain mills, 429,083 bushels ; distilleries, 203,734 bushels ; exports, 702,104 bushels ; leaving a balance of 6,047,137 bushels for feed, seed and other purposes.

(*b*) *Area, Production and Average Yield.* The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46.

BARLEY, MALTING AND OTHER : AREA AND PRODUCTION, AUSTRALIA.

Season.	'000 Acres.			'000 Bushels.			Average Yield per Acre.		
	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
							Bus.	Bus.	Bus.
Average 10 seasons ended 1938–39 ..	428	67	495	7,480	1,073	8,553	17.49	16.03	17.29
1938–39 ..	650	95	745	9,705	1,126	10,831	14.92	11.92	14.54
1942–43 ..	357	94	451	6,782	1,496	8,278	19.03	15.88	18.37
1943–44 ..	357	86	443	6,397	1,192	7,589	17.89	13.96	17.14
1944–45 ..	500	114	614	4,188	841	5,029	8.38	7.38	8.19
1945–46 ..	593	106	699	9,581	1,536	11,117	16.15	14.52	15.90
Average 10 seasons ended 1945–46 ..	539	103	642	8,946	1,399	10,345	16.59	13.57	16.13

During the past ten seasons the area and production of barley of the malting, or 2 row class have been more than five times the corresponding figures for barley of the 6 row, or feed class. The average yield per acre for the last ten-yearly period for malting barley was 22 per cent. higher than that for 6 row barley.

2. **Australian Barley Board.**—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939–40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board is responsible for the marketing and storage of barley, and, like the Australian Wheat Board, has appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in smaller producing States after 1941–42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

Particulars of the barley acquired and sold, and of advances made to growers in respect of the 1942–43 to 1946–47 crops are given in the following table.

AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC., TO JANUARY, 1948.

Pool.	Quantity Acquired.	Quantity Sold.(*a*)	Total Advances made per Bushel on 2-row No. 1 Grade.	Total Payments to Growers.
	'000 bushels.	'000 bushels.	*s.* *d.*	£
No. 4 (1942–43 crop)	3,810	3,839	4 3	771,294
No. 5 (1943–44 „)	3,340	3,356	4 5·75	649,579
No. 6 (1944–45 „)	2,171	2,190	5 0	541,484
No. 7 (1945–46 „)	6,716	6,782	6 0·17	1,062,049
No. 8 (1946–47 „)	8,543	(*b*) 8,431	(*b*) 7 3	(*b*) 3,079,722

(*a*) Includes surplus in out-turn. (*b*) Subject to revision.

3. **Prices.**—The average prices in the Melbourne market during each of the years 1938–39 and 1942–43 to 1946–47 are given in the following table :—

BARLEY : AVERAGE MELBOURNE PRICES PER BUSHEL.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Malting barley ..	3 5¾	4 11	5 3	5 7¼	6 1	6 1
Cape barley ..	2 11½	4 3	4 6	4 10¼	5 4	5 4

4. **Value of Barley Crop.**—The estimated values of the barley crop for the seasons 1944–45 and 1945–46 and the value per acre are shown in the following table :—

BARLEY FOR GRAIN : VALUE OF CROP(*a*), 1944–45 and 1945–46.

Value.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
1944–45—								
Aggregate value	47,900	214,667	61,496	970,936	209,485	41,460	232	1,546,176
Value per acre	£1/14/1	£1/13/3	£4/1/0	£2/14/0	£2/15/0	£7/13/4	£1/2/9	£2/10/4
1945–46—	£	£	£	£	£	£	£	£
Aggregate value	161,760	464,896	100,616	2,477,896	168,032	32,090	480	3,405,770
Value per acre	£5/12/0	£3/9/4	£4/16/7	£5/12/2	£2/10/7	£4/15/2	£6/3/1	£4/17/5

(*a*) Excludes the value of straw.

5. **Imports and Exports.**—Australian exports of barley during the five years ended 1946–47 averaged 933,000 bushels, South Australia being the principal exporting State. Particulars of the Australian oversea imports and exports for the years 1938–39 and 1942–43 to 1946–47 are shown in the following table :—

BARLEY : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	'000 Bushels.	£	'000 Bushels.	£	'000 Bushels.	£
1938–39	..	24	2,618	341,935	2,618	341,911
1942–43	..	..	511	63,846	511	63,846
1943–44	..	4	998	205,790	998	205,786
1944–45	..	..	199	57,277	199	57,277
1945–46	953	240,690	702	359,741	—251	119,051
1946–47	..	..	2,256	1,636,020	2,256	1,636,020

(*a*) Australian currency values.
NOTE.—Minus sign (—) denotes net imports.

In addition to barley grain, there is also an export of Australian pearl and scotch barley, the total for 1945–46 amounting to 2,601,428 lb., valued at £53,159, and consigned mainly to Hong Kong, Malaya and Ceylon.

6. **Malt.**—(i) *Production.* The production of malt in Australia is sufficient to meet local requirements and to provide a margin for export as indicated in the next section. Details of the quantity of grain used and the production of barley malt are given in the following table.

MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.

Year.	Barley Malt.		Wheaten and Oaten Malt.	
	Grain used.	Malt produced.	Grain used.	Malt produced.
	Bushels.	Bushels.(*a*)	Bushels.	Bushels.(*a*)
1938–39	3,729,730	3,620,909	(*b*)	111,728
1942–43	3,613,086	3,586,422	172,956	149,948
1943–44	3,915,925	3,822,215	221,739	196,153
1944–45	3,568,981	3,512,957	291,909	286,844
1945–46	3,734,780	3,596,004	241,992	229,811

(*a*) 40 lb. per bushel. (*b*) Not available.

(ii) *Imports and Exports.* The surplus production of malt in Australia, after meeting local requirements, is shipped chiefly to the Far East and New Zealand. Details of imports and exports for the years 1938–39 and 1942–43 to 1946–47 are given in the next table :—

MALT : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	Bushels.	£	Bushels.	£	Bushels.	£
1938–39 ..	140	91	137,473	49,552	137,333	49,461
1942–43 ..	9,695	1,299	15,588	4,895	5,893	3,596
1943–44 ..	..	..	19,695	9,756	19,695	9,756
1944–45 ..	..	..	27,390	12,521	27,390	12,521
1945–46 ..	..	..	15,040	6,590	15,040	6,590
1946–47 ..	..	..	20,673	8,023	20,673	8,023

(*a*) Australian currency values.

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. Separate particulars for some of the leading countries during 1945 were not available at date of publication, but the United States of America produced 264 million bushels and Canada 158 million bushels during that year. Production in the U.S.S.R. (Russia) in 1935 approximated 360 million bushels, while China produced an average of 343 million bushels for the five years 1935 to 1939.

The following table shows the latest available details of the world's acreage of barley, together with the production and average yield per acre, according to the results compiled by the Food and Agriculture Organization of the United Nations :—

BARLEY : WORLD PRODUCTION.

Period.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1935-1939	114.2	2,338	20.47
1939	117.0	2,400	20.51
1940	119.0	2,350	19.75
1941	116.0	2,325	20.04
1942	120.0	2,515	20.96
1943	112.5	2,310	20.53
1944	108.6	2,180	20.07
1945(*a*)	106.2	2,030	19.11

(*a*) Preliminary. Subject to revision.

§ 8. Rice.

Rice growing is almost entirely concentrated in Asia and the extent to which this crop is grown in other countries is relatively small. In Australia experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales for a number of years before 1924–25, but it was not until that year that an attempt was made to grow the crop on a commercial basis, 16,240 bushels being produced from 153 acres, or a average of 106 bushels per acre. Favoured by tariff protection and high average yields, the development of rice culture in the Murrumbidgee Irrigation Area made rapid progress, and production soon equalled Australian requirements and later provided a margin for export.

The area which growers may plant is subject to control. Each year representatives of the Rice Marketing Board, rice growers, the Department of Agriculture and the Water Conservation and Irrigation Commission of New South Wales meet to decide the maximum area which growers may plant in the following season. Because of war-time demands the areas sown have been expanded, but the extent of any expansion is determined by the limits imposed by the quantity of water available.

Consequent upon the outbreak of war in the Pacific in 1941 and the enemy occupation of the rice producing countries north of Australia, the demand for rice was so great as to be beyond the capacity of the industry. From August, 1942 civilian consumption in Australia was prohibited, except in the case of invalids, hospitals, resident Asiatics and other priorities, and the total production was diverted to service needs and for the feeding of natives in the south-west Pacific area. This restriction still continues in order to meet, as far as possible, the needs of native populations in the Pacific area, whose diet consists chiefly of rice.

For the five years ended 1938–39 the area sown to rice in the Murrumbidgee Irrigation Area averaged 22,900 acres. No marked expansion occurred until after Japan's entry into the war in 1941. The area was increased to 34,300 acres in 1942–43 and to 36,500 acres in 1943–44. This expansion was not sufficient to meet the war-time demand and new areas in the Wakool and Berenembah Irrigation Districts of New South Wales were developed, bringing the total area for the State and for Australia to 40,690 acres in 1943–44. Owing to water shortage the area sown in 1944–45 fell to 24,596 acres, but rose to 28,372 acres in 1945–46.

The production of paddy rice reached its highest level in 1943–44 with more than 4 million bushels or an average yield of just under 100 bushels per acre. In 1944–45 it dropped to nearly 1.7 million bushels or 68.8 bushels per acre due to water shortage arising from severe drought conditions. In 1945–46 production recovered to 2.7 million bushels or an average of 96.4 bushels per acre.

Prior to 1938–39 the greater part of Australia's export of rice was consigned to the United Kingdom, but, because of shortages in Pacific areas arising from war damage in south-east Asia, exports from Australia have been diverted mainly to the islands in this region.

Details relating to area, production, and trade for the years 1938–39 and 1942–43 to 1945–46 are shown in the following table :—

RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA.

Year.	No. of Growers. (a)	Area. (a)	Production (Paddy Rice). (a)		Average Yield (Paddy) per acre. (a)	Imports.		Exports.	
			Quantity.	Gross Value. (b)		Uncleaned.	Cleaned.	Uncleaned.	Cleaned
		Acres.	'000 Bushels.(c)	£'000.	Bushels.	Centals.	Centals.	Centals.	Centals
1938–39 ..	313	23,533	2,775	540	117.92	29	46,019	3,386	277,851
1942–43 ..	348	34,232	3,084	759	90.11	..	1,800	37,085	209,628
1943–44 ..	364	40,690	4,015	983	98.67	1	3,258	259,230	531,158
1944–45 ..	330	24,596	1,693	416	68.82	..	..	262,429	188,815
1945–46 ..	329	28,372	2,735	672	96.40	..	420	344,874	222,485

(a) New South Wales. (b) Excludes the value of straw. (c) 42 lb. per bushel.

§ 9. Sorghum for Grain.

The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939–40 but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for about 90 per cent. of the area sown. The grain produced is fed to live-stock and is becoming an important source of supply for supplementing other coarse grains for the feeding of live-stock. Other sorghums are grown in Australia mainly as green fodder, hay and for the production of brush for broom manufacture. Details of these are included in § 14 and § 19 hereafter. Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM : AREA, PRODUCTION AND YIELD, AUSTRALIA.

Year	Area.			Production.			Average Yield per Acre.		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels	Bushels.
1939–40 ..	(a)	4,397	b 4,397	(a)	57,936	b 57,936	(a)	13.17	b 13.17
1940–41 ..	(a)	9,852	b 9,852	(a)	193,978	b 193,978	(a)	19.69	b 19.69
1941–42 ..	(a)	25,340	b 25,340	(a)	361,984	b 361,984	(a)	14.28	b 14.28
1942–43 ..	(a)	40,630	b 40,630	(a)	693,347	b 693,347	(a)	17.06	b 17.06
1943–44 ..	(a)	54,685	b 54,685	(a)	1,333,073	b 1,333,073	(a)	24.30	b 24.30
1944–45 ..	8,393	54,709	63,102	126,372	1,110,477	1,236,849	15.06	20.30	19.60
1945–46 ..	6,248	49,451	55,699	100,182	918,780	1,018,962	16.03	18.58	18.29

(a) Not available. (b) Queensland only.

§ 10. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the principal other grain an pulse crops grown in Australia are navy beans, blue peas and rye.

The areas of crops of blue peas and navy beans for the season 1945–46 were 23,780 acres and 11,058 acres respectively, giving yields of 7,996 tons and 1,856 tons, or averages of 0.34 tons and 0.17 tons respectively per acre, which was less than the average yield for the decennium ended 1945–46. Navy beans are grown chiefly in New South Wales, Queensland and Victoria in that order, but in other States the quantity produced is negligible. The production of blue peas is almost entirely restricted to Tasmania which accounts for more than 80 per cent. of the total area and production for Australia. Blue peas are exported in considerable quantities to the United Kingdom, the chief exporting State being Tasmania.

The total area of rye in Australia during the season 1945–46 was 43,654 acres, yielding 201,308 bushels, or an average of 4.61 bushels per acre, as compared with the average of 6.85 bushels for the last ten seasons. Of the total area sown to rye in 1945–46, about 76.3 per cent. was in South Australia, 17.6 per cent. in Victoria, and 3.4 per cent. in Western Australia.

§ 11. Potatoes.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* Victoria possesses peculiar advantages for the growth of potatoes, as the rainfall is generally satisfactory and the climate is unfavorable to the spread of Irish blight ; consequently the crop is widely grown. The principal areas are the central highlands, the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, but the production has exceeded that of Victoria in recent years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 80.71 per cent. of the total for Australia in 1945–46.

The area sown and production of potatoes in each State during the years 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are given hereunder :—

POTATOES : AREA SOWN AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
				AREA SOWN.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average 10 seasons ended 1938–39	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1938–39 ..	16,866	34,396	10,389	4,290	5,355	26,696	56	98,048
1942–43 ..	24,488	51,757	9,885	7,233	6,399	40,383	64	140,209
1943–44 ..	30,067	70,430	14,609	8,958	7,375	60,500	136	192,075
1944–45 ..	34,796	83,238	18,173	12,562	11,735	81,092	207	241,803
1945–46 ..	22,865	63,000	15,216	8,854	9,781	56,245	118	176,079
Average 10 seasons ended 1945–46	23,011	49,820	12,533	6,506	6,561	43,281	84	141,796
				PRODUCTION.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1938–39 ..	39,385	81,415	19,183	18,487	26,532	89,330	109	274,441
1942–43 ..	64,728	195,138	22,438	32,866	32,246	135,930	215	483,561
1943–44 ..	65,655	217,380	30,717	35,991	30,552	217,800	960	509,055
1944–45 ..	80,587	305,216	33,644	64,154	51,190	345,232	1,026	881,049
1945–46 ..	61,768	230,749	33,605	35,097	47,672	236,140	575	645,606
Average 10 seasons ended 1945–46	55,876	177,858	23,407	30,011	32,027	160,125	361	479,665

The area sown to potatoes averaged 130,000 acres during the ten years ended 1935–36 and rose to 142,000 acres for the decennium ended 1945–46 after declining to 120,000 acres for the decennium ended 1942–43. Victoria, with a drop of 21,000 acres, was mainly responsible for the decline. After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes rose rapidly, and in 1943–44 was 56 per cent. greater than in 1940–41. The greatest ever sown was 242,000 acres in 1944–45, when there were record areas in Victoria and Tasmania. The total area under potatoes declined to 176,000 acres in 1945–46.

The expansion during the war years was necessary in order to meet the large demand for potatoes by Australian and Allied Servicemen based upon Australia and to maintain supplies for civil needs. As a result, production rose to the record level of 881,049 tons in 1944–45. A decline of about 27 per cent. to 645,606 tons was recorded for 1945–46.

(ii) *Average Yield.* Average yields for each State for the seasons 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown hereunder :—

POTATOES : AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1938–39	2.34	2.37	1.85	4.31	4.95	3.35	1.95	2.80
1942–43	2.64	3.77	2.27	4.54	5.04	3.37	3.36	3.45
1943–44	2.18	3.09	2.10	4.02	4.14	3.60	7.06	3.12
1944–45	2.32	3.67	1.85	5.11	4.36	4.26	4.96	3.64
1945–46	2.70	3.66	2.21	3.96	4.87	4.20	4.87	3.67
Average 10 seasons ended 1945–46 ..	2.43	3.57	1.89	4.61	4.88	3.70	4.31	3.39

Compared with the average yield per acre obtained in other countries, that returned for Australia is very low ; the production in New Zealand, for example, in 1945–46 averaged 6.04 tons per acre from an area of 23,228 acres, as compared with 3.67 tons per acre in Australia from 176,079 acres.

(iii) *Relation to Population.* The average annual production of potatoes for the last five seasons was 81 tons per 1,000 of population. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906–7 was nearly a ton, while for the last five seasons it has averaged almost 17 cwt. due to an abnormal production of 1.4 tons per head in 1944–45. Details for each State for the 1938–39 and 1942–43 to 1945–46 seasons are as follows :—

POTATOES : PRODUCTION PER 1,000 OF POPULATION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons
1938–39 ..	14	43	19	31	57	377	9	40
1942–43 ..	23	99	22	54	69	565	18	67
1943–44 ..	23	109	29	58	63	893	69	82
1944–45 ..	28	152	31	103	105	1,402	71	120
1945–46 ..	21	114	31	55	97	947	39	87

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the seasons 1944–45 and 1945–46 is given in the following table :—

POTATOES : VALUE OF CROP, 1944–45 and 1945–46.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1944–45—	£	£	£	£	£	£	£	£
Aggregate value	1,238,020	3,574,332	532,697	653,370	639,875	4,315,400	15,759	10,969,453
Value per acre	£35/11/7	£42/18/10	£29/6/3	£52/2/3	£54/10/7	£53/4/4	£76/2/7	£45/7/4
1945–46—	£	£	£	£	£	£	£	£
Aggregate value	880,160	2,496,050	532,079	458,793	599,883	3,004,880	8,280	7,989,425
Value per acre	£38/18/0	£39/12/5	£34/19/4	£51/16/4	£61/6/8	£53/8/6	£70/3/5	£45/7/6

3. **Consumption.**—The annual civilian consumption of potatoes in Australia during each of the three years ended 1946 amounted to 334,000 tons, 359,300 tons and 408,600 tons respectively, or 113.7 lb., 119.6 lb. and 124.9 lb. per head of population respectively. These figures exclude the quantities used for seed, which averaged about 100,000 tons annually over this period. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria, which have a surplus.

4. **Australian Potato Committee.**—This Committee was set up under National Security (Potatoes) Regulations on 27th April, 1942, to ensure that adequate supplies of potatoes would be available in Australia to meet the needs of the Defence Forces and the civilian population during the war.

War-time control covered production of quantities needed for all purposes, the regulation of marketing and distribution to meet service and civilian needs, and the spreading of supplies over the season.

A guaranteed minimum price was assured for the first season, any excess of market return above the minimum going to growers. For later seasons there was a fixed contract price, allowing supplies to be directed according to needs rather than market prices.

Production was arranged through State Departments of Agriculture, which supervised controls of grading. Distribution was arranged through trade channels, which marketed the Commonwealth-owned potatoes.

The Committee worked through an Executive Member, with State Deputies, assisted by Advisory Committees of State officers, growers and merchants.

Supplies from growers were controlled by delivery quotas to regulate the flow on to the market. Quotas for merchants to market applied when supplies were scarce.

The retail price was subsidized under the price stabilization policy, and was less than the growers' contract price.

The system gave favourable conditions to growers, and their organizations are moving for stabilization of the industry on similar lines in the post-war period.

The Commonwealth has continued contracts for the 1947–48 season. State Boards have been formed in Western Australia, New South Wales and Victoria, and action to constitute them is being taken in Tasmania and Queensland. Marketing from 1948 onward is therefore likely to be under control of State Boards in most States.

In the following table details of the quantities of potatoes received and the manner of their distribution are given for the years ended 31st October, 1944, 1945 and 1946. The quantities shown are those recorded by the Committee and therefore exclude a quantity which does not come within the Committee's control.

AUSTRALIAN POTATO COMMITTEE : RECEIVALS AND DISPOSALS OF POTATOES, AUSTRALIA.

Particulars.	Year ended 31st October—					
	1944.		1945.		1946.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
Quantity received from current crop	441,435	100	619,710	100	477,980	89.7
Carry-over from previous year	..	..	..	..	55,166	10.3
Total	441,435	100	619,710	100	533,146	100
Distribution—						
Civilian consumption ..	317,801	72.0	342,676	55.3	389,135	73.0
Service consumption ..	76,859	17.4	69,548	11.2	25,608	4.8
Exports	5,226	1.2	25,005	4.0	22,287	4.2
Canning including Meat Packs	16,473	3.7	19,490	3.2	7,078	1.3
Dehydration	21,758	4.9	59,025	9.5	29,270	5.5
Loss in weight, stock feed and waste	3,318	0.8	48,800	7.9	11,397	2.1
Carried to next year, including quantities in transit	..	..	55,166	8.9	48,371	9.1
Total	441,435	100	619,710	100	533,146	100

5. **Imports and Exports.**—Under normal conditions small quantities of potatoes are exported, principally to the Pacific Islands and Papua. In case of a shortage in Australia, supplies are usually obtained from New Zealand. Details showing the trade for the years 1938–39 and 1942–43 to 1946–47 are given in the following table :—

POTATOES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	Tons.	£	Tons.	£	Tons.	£
1938–39	2	35	1,255	17,443	1,253	17,408
1942–43	..	..	1,705	27,064	1,705	27,064
1943–44	..	..	2,956	43,932	2,956	43,932
1944–45	..	5	8,152	135,545	8,152	135,540
1945–46	..	23	44,645	861,023	44,645	861,000
1946–47	..	3	25,852	504,658	25,852	504,655

(*a*) Australian currency values.

§ 12. Onions.

1. **Area, Production and Average Yield.**—Australia's supply of onions comes chiefly from Victoria which accounted for 66 per cent. of the total area and 69 per cent. of the quantity produced in 1945–46. Queensland came next with nearly 20 per cent. of the area and 15 per cent. of the production, leaving a balance of about 14 per cent. of area and 16 per cent. of production distributed among the remaining four States. Details of the area, production and average yield per acre are given in the following table for the years 1938–39 and 1942–43 to 1945–46, together with averages for the ten year periods ended 1938–39 and 1945–46.

ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average 10 seasons ended 1938–39 ..	124	6,159	840	450	109	5	3	7,690
1938–39	105	4,898	1,001	542	149	7	6	6,708
1942–43	1,096	5,741	1,843	495	400	133	8	9,716
1943–44	876	6,151	1,934	702	445	62	5	10,175
1944–45	835	7,905	2,124	635	330	50	9	11,888
1945–46	747	8,170	2,537	511	383	52	8	12,408
Average 10 seasons ended 1945–46 ..	514	5,887	1,529	568	264	43	5	8,810
PRODUCTION.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons
Average 10 seasons ended 1938–39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1938–39	316	10,404	2,831	3,892	874	37	18	18,372
1942–43	3,288	36,500	7,480	4,059	2,946	373	42	54,688
1943–44	2,774	27,994	7,665	5,274	2,945	237	33	46,922
1944–45	2,587	47,277	8,677	5,429	2,377	137	28	66,512
1945–46	2,939	46,338	9,939	4,779	2,720	54	24	66,793
Average 10 seasons ended 1945–46 ..	1,510	33,606	5,055	4,510	1,864	117	22	46,684
AVERAGE YIELD PER ACRE.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1938–39	3.01	2.12	2.83	7.18	5.87	5.29	3.00	2.74
1942–43	3.00	6.36	4.06	8.20	7.37	2.80	5.25	5.63
1943–44	3.17	4.55	3.96	7.51	6.62	3.82	6.60	4.61
1944–45	3.10	5.98	4.09	8.55	7.20	2.74	3.11	5.59
1945–46	3.93	5.67	3.92	9.35	7.10	1.04	3.00	5.38
Average 10 seasons ended 1945–46 ..	2.94	5.71	3.31	7.94	7.06	2.72	4.07	5.30

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 18.

2. **Gross Value of Onion Crop.**—The gross value of the onion crop is shown in the following table for the years 1938–39 and 1942–43 to 1945–46.

ONIONS : GROSS VALUE, AUSTRALIA.

Year.	Total Production.	Gross Value of Crop.	Average value per ton.	Average value per acre.
	Tons.	£	£ s. d.	£ s. d.
1938–39	18,372	305,744	16 12 10	45 11 7
1942–43	54,688	781,398	14 5 9	80 8 6
1943–44	46,922	695,909	14 16 7	68 7 2
1944–45	66,512	1,129,246	16 19 7	94 19 10
1945–46	66,793	961,111	14 7 9	77 9 2

3. **Consumption.**—During the war years the onion requirements of Australian and Allied Services based upon Australia were the first to be met, the balance of production being available for civilian consumption and for exports. Throughout these years, however, production was such that civilian supplies were not seriously limited. The following table furnishes details of the quantity available for consumption by Services and civilians for the years 1938–39 and 1942–43 to 1945–46.

PRODUCTION AND CONSUMPTION OF ONIONS, AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	Tons.	Tons.	Tons.	Tons.	Tons.
Production	18,372	54,688	46,922	66,512	66,793
Less net exports	+3,548	439	3,239	1,106	6,443
Balance available for Civilian and Service consumption.. ..	21,920	54,249	43,683	65,406	60,350

Plus sign (+) signifies net imports.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia. During the five years ended 1945–46 1,296 tons, valued at £A10,984 were imported, principally from New Zealand, while during the same period the exports, which amounted to 11,934 tons, valued at £A193,763, were shipped mainly to the Pacific Islands.

§ 13. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance is hay, which for the season 1945–46 constituted 13.50 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 897. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area and production of hay of all kinds

in the several States during the years 1938–39 and 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown below :—

HAY : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average 10 seasons ended 1938–39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1938–39 ..	1,068,925	1,104,558	65,732	519,309	408,276	79,959	3,501	3,250,260
1942–43 ..	736,157	788,792	70,025	425,505	253,150	82,062	3,424	2,359,115
1943–44 ..	534,470	740,672	71,992	312,277	282,614	99,283	2,806	2,044,114
1944–45 ..	585.829	901,983	64,783	428,173	328,729	96,012	3,174	2,408,683
1945–46 ..	758,400	1,060,496	69,084	484,060	281,410	99,758	4,028	2,757,236
Average 10 seasons ended 1945–46 ..	732,764	974,290	65.974	476,342	360,407	88,450	3,076	2,701,303
PRODUCTION.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1938–39 ..	1,181,264	892,975	109,761	585,554	437,809	109.533	4,265	3,321,161
1942–43 ..	985,743	1,050,107	118,195	568,529	277,957	109,956	5,568	3,116,055
1943–44 ..	735,641	963,103	138,080	407,078	314,359	153,834	4,777	2,716,872
1944–45 ..	371,153	704,246	115,263	316,802	338,912	145,911	1,231	1,993,518
1945–46 ..	990,747	1,444,250	126,258	521,957	287,476	117,079	5,208	3,492,975
Average 10 seasons ended 1945–46 ..	830,530	1,154,828	109,728	537,690	378,485	127,039	3,940	3,142.240

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915–16, 3,597,771 acres, was the largest on record, whilst the average for the decennium ended 1945–46 was 2,701,303 acres.

(ii) *Average Production.* During the last ten years Queensland and Tasmania show the highest average production per acre, although the area sown in these States is small. For the same period the lowest yield for Australia as a whole was that of 16.6 cwt. per acre in 1944–45, while the highest was that of 27.8 cwt. in 1939–40. The average for the decennium was 23.2 cwt. Particulars for the several States for the seasons 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are given hereunder :—

HAY : PRODUCTION PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1938–39	1.11	0.72	1.67	1.13	1.07	1.37	1.22	1.02
1942–43	1.34	1.33	1.69	1.34	1.10	1.34	1.63	1.32
1943–44	1.38	1.30	1.92	1.30	1.11	1.55	1.70	1.33
1944–45	0.63	0.78	1.75	0.74	1.03	1.52	0.39	0.83
1945–46	1.31	1.36	1.83	1.08	1.02	1.17	1.29	1.27
Average 10 seasons ended 1945–46 ..	1.13	1.19	1.66	1.13	1.05	1.44	1.28	1.16

(iii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1938–39 and the four seasons ended 1945–46 are given in the following table :—

HAY : AREA UNDER VARIOUS KINDS GROWN.

Varieties.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	Acres.	Acres.	Acres.	Acres.	Acres.
NEW SOUTH WALES—					
Wheaten	559,437	287,470	198,066	279,120	389,918
Oaten	413,002	351,985	252,300	237,834	289,720
Lucerne	92,598	91,671	82,179	66,820	69,745
Other..	3,888	5,031	1,925	2,055	9,017
Total	1,068,925	736,157	534,470	585,829	758,400
VICTORIA—					
Wheaten	258,839	67,759	71,467	104,488	114,165
Oaten	722,528	518,040	448,315	602,300	667,451
Lucerne	(*a*) 36,838	36,123	36,040	32,674	44,416
Other..	86,353	166,870	184,850	162,521	234,464
Total	1,104,558	788,792	740,672	901,983	1,060,496
QUEENSLAND—					
Wheaten	6,628	10,678	6,891	10,377	13,015
Oaten	4,901	6,085	6,889	5,944	6,817
Lucerne	50,228	51,715	50,391	42,427	45,645
Other..	3,975	1,547	7,821	6,035	3,607
Total	65,732	70,025	71,992	64,783	69,084
SOUTH AUSTRALIA—					
Wheaten	227,604	152,589	120,129	208,667	224,170
Oaten	270,425	230,901	157,352	184,603	211,361
Lucerne	4,805	4,424	4,157	3,079	8,902
Other..	16,475	37,591	30,639	31,824	39,627
Total	519,309	425,505	312,277	428,173	484,060
WESTERN AUSTRALIA—					
Wheaten	165,153	100,947	117,149	153,441	104,798
Oaten	204,610	118,000	126,093	137,606	138,706
Lucerne	..	239	104	75	128
Other..	38,513	33,964	39,268	37,607	37,778
Total	408,276	253,150	282,614	328,729	281,410
TASMANIA—					
Wheaten	979	1,062	3,879	3,719	4,779
Oaten	64,310	61,542	69,002	65,651	70,988
Lucerne	3	694	663	475	499
Other..	14,667	17,864	25,739	26,167	23,492
Total	70,959	82,062	99,283	96,012	99,758

(*a*) Includes barley and rye hay.

For all States combined the proportions of the areas sown to the principal kinds of hay in 1945–46 were 50 per cent. for oaten, 31 per cent. for wheaten, 6 per cent. for lucerne, and 13 per cent. for other hay. In that year, oaten hay predominated in the States of Victoria, Western Australia and Tasmania, wheaten hay in New South Wales and South Australia, and lucerne in Queensland.

2. **Value of Hay Crop.**—The following table shows the value, and the value per acre, of the hay crop of the several States for the seasons 1944–45 and 1945–46 :—

HAY : VALUE OF CROP, 1944–45 and 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
1944–45—								
Aggregate value	3,174,350	4,717,788	1,239,732	1,888,221	1,277,911	809,810	10,951	13,118,763
Value per acre	£5/8/4	£5/4/7	£10/2/9	£4/8/2	£3/17/9	£8/8/8	£3/9/0	£5/8/11
1945–46—	£	£	£	£	£	£	£	£
Aggregate value	6,792,280	6,098,709	1,383,751	2,470,384	1,032,389	632,230	35,646	18,445,389
Value per acre	£8/19/1	£5/15/0	£20/0/7	£5/2/1	£3/13/5	£6/6/9	£8/17/0	£6/13/10

3. **Farm Stocks of Hay.**—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1943 to 1946 are given in the table below.

STOCKS OF HAY HELD ON FARMS.

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1943 ..	698,332	1,107,137	114,131	499,475	188,740	74,277	2,201	2,684,293
1944 ..	522,294	859,302	107,375	403,002	140,494	89,010	2,246	2,123,723
1945 ..	189,986	460,369	71,162	200,790	184,321	82,736	606	1,189,970
1946 ..	504,521	1,026,581	86,722	307,494	156,841	78,414	2,123	2,162,696

The decrease in stocks at 31st March, 1945 resulted from the disastrous drought which occurred during 1944–45.

4. **Imports and Exports.**—Under normal conditions hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1945–46 3,418 tons were imported, while the exports amounted to 522 tons, valued at £6,574.

§ 14. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder mainly in connexion with the dairying industry. These crops may be cut for feeding to live-stock as green fodder or may be fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live-stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar cane also are so used. In 1945–46 the area under green fodder (1,805,748 acres) consisted of oats (806,021 acres), lucerne (219,443 acres), wheat (175,348 acres), barley (89,918 acres), sorghum (85,329 acres), maize (75,058 acres), rye (26,366 acres), sugar cane (5,452 acres) and other crops (322,813 acres). Particulars concerning the area of green fodder in the several States during each of the years 1938–39 and 1942–43 to 1945–46 are given in the following table :—

GREEN FODDER : AREA.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1938–39 ..	573,569	108,796	448,643	275,988	352,442	28,681	681	1,788,800
1942–43 ..	728,404	103,598	578,452	285,587	351,509	62,751	1,518	2,111,819
1943–44 ..	782,265	112,880	600,181	269,645	446,803	51,592	1,436	2,264,802
1944–45 ..	647,187	73,159	622,268	262,394	388,466	48,087	1,679	2,043.240
1945–46 ..	541,810	63,311	581,905	189,882	288,206	138,540	2,094	1,805,748

2. **Value of Green Fodder Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1945–46, excluding Western Australia, may be taken approximately as £3,854,000.

§ 15. Sugar-cane and Sugar-beet.

1. **Sugar-cane.**—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter State. Thus, of a total area of 336,960 acres of sugar-cane grown for this purpose in Australia for the season 1945–46, there were 321,894 acres or about 96 per cent.

in Queensland. This latter area is made up of 229,736 acres cut for crushing, 12,151 acres cut for plants, and 80,007 acres left to stand-over or young cane on areas not ready for cutting. Sugar-cane growing appears to have commenced in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862–63. In the following season the New South Wales returns show an area of 2 acres of this crop. The area of cane in New South Wales reached its maximum in 1895–96 with a total of 32,927 acres. Thenceforward, with slight variations, it fell gradually to 10,490 acres in 1918–19, but from that year it expanded until 1924–25, when about 20,000 acres were planted. Since 1924–25, the area has fluctuated between 15,000 acres and 21,000 acres, the average for the ten seasons ended 1945–46 amounting to 18,689 acres. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, but, because of the contingencies arising from war, the area under sugar in that State has declined since 1940–41. In 1939–40 Queensland's acreage under cane reached its highest level, namely, 353,996 acres. The area of sugar-cane in Australia for the seasons 1938–39 and 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown in the following table :—

SUGAR-CANE : AREA.

(Acres.)

Season.	New South Wales.			Queensland.			Australia.			
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total
Average 10 seasons ended 1938–39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1938–39 ..	10,458	10,772	163	251,847	84,098	11,254	262,305	94,870	11,417	368,592
1942–43 ..	9,732	8,958	239	231,256	67,247	11,619	240,988	76,205	11,858	329,051
1943–44 ..	8,240	7,092	281	220,932	86,312	13,563	229,172	93,404	13,844	336,420
1944–45 .	6,771	6,702	270	219,652	80,177	12,406	226,423	86,879	12,676	325,978
1945–46 ..	5,943	8,860	263	229,736	80,007	12,151	235,679	88,867	12,414	336,960
Average 10 seasons ended 1945–46 ..	9,126	9,322	241	241,602	80,449	11,759	250,728	89,771	12,000	352,499

(ii) *Productive and Unproductive Cane.* The areas shown in the preceding table do not include the small acreage cut for green fodder which in Queensland in 1945–46 amounted to 4,673 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

(iii) *Production of Cane and Sugar.* For Queensland, statistics of the production of sugar-cane are not available prior to the season 1897–98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 6,313,369 tons in 1939–40.

The average production of cane during the ten seasons ended 1945–46 was 5,130,554 tons, and of raw sugar 740,388 tons. Particulars of the total production of cane and sugar for the years 1938–39, 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are as follows :—

SUGAR-CANE ; PRODUCTION OF CANE AND SUGAR.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1938–39	336,701	45,022	5,342,193	775,064	5,678,894	820,086
1942–43	338,013	44,290	4,353,488	605,609	4,691,501	649,899
1943–44	290,364	37,442	3,397,617	486,423	3,687,981	523,865
1944–45	200,050	26,423	4,398,268	643,520	4,598,318	669,943
1945–46	166,069	21,220	4,551,971	644,661	4,718,040	665,881
Average 10 seasons ended 1945–46 ..	294,462	39,195	4,836,092	701,199	5,130,554	740,394

The production of raw sugar in Australia in 1945–46 amounted to 665,881 tons manufactured from 4,718,040 tons of cane, the maximum production being 928,676 tons recorded in 1939–40. This decline in production arises from war-time contingencies such as labour shortage and insufficient fertilizers. In addition, variations in seasonal conditions were contributing factors.

Official data are not available regarding the total number engaged in the sugar industry in Queensland, other than the number of separate holdings growing cane (6,418 in 1945–46) and of employees in sugar mills (4,948 in 1945–46).

According to data obtained from the Occupation Survey of 1st June, 1945, the number of persons engaged in the growing and harvesting of sugar cane in New South Wales and Queensland was as follows :—

SUGAR-CANE : NUMBER OF PERSONS ENGAGED IN GROWING AND HARVESTING, OCCUPATION SURVEY, 1st JUNE, 1945.

Particulars.	New South Wales.	Queensland.
	No.	No.
Sugar-grower (including Manager)	222	6,842
Cane-cutter	90	2,636
Foreman, Overseer	4	38
Labourer	147	5,492
Total	463	15,008

(iv) *Average Production of Cane Sugar.* Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1945–46 were 17.60 tons for New South Wales, and 18.48 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 2.34 tons and 2.68 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1945–46 were 20.46 tons and 2.95 tons respectively, as compared with 18.37 tons and 2.50 tons for the decennium ended 1935–36.

SUGAR-CANE AND SUGAR: YIELD PER ACRE.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1938–39	32.20	4.31	7.48	21.21	3.09	6.87	21.65	3.13	6.92
1942–43	34.73	4.55	7.63	18.83	2.62	7.19	19.47	2.70	7.22
1943–44	35.24	4.54	7.76	15.38	2.21	6.99	16.09	2.29	7.04
1944–45	29.55	3.90	7.57	20.02	2.93	6.83	20.31	2.96	6.86
1945–46	27.94	3.57	7.83	19.81	2.81	7.06	20.02	2.83	7.09
Average 10 seasons ended 1945–46 ..	32.27	4.29	7.51	20.02	2.90	6.89	20.46	2.95	6.93

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1945–46 it required on the average 6.93 tons of cane to produce 1 ton of sugar, or 14.43 per cent. of its total weight, as compared with 7.34 tons for the ten years ended 1935–36. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased, and in 1937–38 only 6.78 tons of cane were required to produce one ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation, the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(vi) *Relation to Population.* The yield of raw sugar in Australia during recent years was more than sufficient to supply local requirements, the average annual production during the last five years amounting to 201 lb. per head of population. Details for the years 1938–39 and 1942–43 to 1945–46 are as follows :—

RAW SUGAR: PRODUCTION PER HEAD OF POPULATION.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	lb.	lb.	lb.	lb.	lb.
New South Wales ..	37	35	29	21	16
Queensland	1,731	1,302	1,031	1,346	1,330
Australia	266	202	162	205	201

(vii) *Consumption.* The average annual consumption of raw sugar in Australia during the five years ended 1945–46 was estimated at 503,358 tons, equal to 155.18 lb. of raw sugar or 148.20 lb. of refined sugar per head of population. The sugar content of jam, preserved fruit, milk, etc., exported during the period has been deducted in arriving at the figures quoted. The quantity of sugar used in factories during 1938–39 and each of the four years ended 1945–46 is shown in the following table, the figures including, where necessary, estimates of consumption based on the sugar content of the finished product. Particulars of sugar used in establishments not classified as factories are not available, and consequently the quantities shown below are deficient to that extent.

SUGAR : CONSUMPTION IN FACTORIES, AUSTRALIA.

Factories.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	Tons.	Tons.	Tons.	Tons.	Tons.
Aerated Waters and Cordials	11,810	21,167	24,593	25,757	26,115
Bacon Factories	267	356	357	367	310
Biscuits and Bakeries, including Cakes and Pastry	18,801	24,881	26,648	25,959	25,538
Breweries	16,733	19,612	20,132	20,404	21,081
Cereal Foods	1,287	1,267	1,422	1,413	1,112
Condensed and Concentrated Milk	6,889	12,605	12,973	13,611	15,922
Confectionery, Ice Cream, etc.	26,926	33,023	38,979	39,193	41,493
Jams, Jellies and Preserved Fruit(*a*)	40,537	71,041	71,610	67,625	70,026
Wineries and Distilléries (*b*)	..	19,265	49,479	30,925	25,073
Other	633	2,942	944	1,007	(*c*) 4,271
Total	123,883	206,159	247,137	226,261	230,941

(*a*) Includes Condiments, Pickles, etc. (*b*) Raw Sugar. (*c*) Includes sugar consumed in the industrial and heavy chemicals and dehydrated fruit and vegetables industries.

(viii) *Control of Cane Production in Queensland.* Agreements between the Commonwealth and Queensland Governments have fixed the price of sugar in Australia from time to time. Under the latest agreement, the wholesale price of refined sugar in each of the capital cities was fixed at £33 4s. per ton or 4d per lb. retail for the five years ended 1951. On the 3rd December, 1947, the wholesale price fixed under this agreement was increased to £37 6s. 8d. per ton or 4½d. per lb. retail. The net proceeds of all sugar sold in Australia and sugar sold abroad are pooled and a uniform price per ton is paid to the mills. This pooling is made possible by the acquisition by the Queensland Government of all sugar produced in the State, under legislation which has been in force since 1915. The small New South Wales production (about 5 per cent. of the whole) is also acquired by the Queensland Sugar Board by private agreement.

Sugar production, which in 1923 had scarcely been sufficient to cover Australian requirements, grew very rapidly in subsequent years. In 1925 the Queensland Government took steps to prevent, as a general rule, new land from being opened up for cane production. At that date 56 per cent. of the sugar production was consumed in Australia and 44 per cent. exported. After 1925 production remained stable for some years. In 1929 the operations of the pool, which had hitherto received at a uniform price all sugar offered it by the mills, were re-organized. After 1929, mills received the full pool price for sugar up to the amount of their previous maximum production only. Any further supplies were acquired at export price only.

Between 1929 and 1939 the export price was generally less than half the pool price. In spite of this, production increased by 72 per cent. during that period. In 1939, in view of the fact that the International Sugar Agreements imposed certain restrictions on the volume of Australian exports, the Queensland Parliament passed further legislation limiting the pool to 737,000 tons. Any production in excess of this was to be acquired at a penalty price of 10s. per ton. This tonnage was divided up in quotas between the mills, on the understanding that the mills would allocate quotas of production to individual farmers. Proclamations issued by the Queensland Government, however, permitted the harvesting of the whole of the 1939 and 1940 crops. Crops for subsequent years have been similarly treated.

2. **Sugar-beet.**—Victoria is the only State growing beet for sugar, although 5 tons of sugar-beet were produced from 1 acre in Tasmania during 1942–43. Particulars of acreage and production for Victoria for the years 1938–39 and 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are shown in the following table :—

SUGAR-BEET : AREA AND PRODUCTION, VICTORIA.

Particulars.		Average Ten Seasons ended 1938–39	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	Average Ten Seasons ended 1945–46.
Area sown ..	acres	3,312	4,268	955	836	485	108	2,486
Production ..	tons	36,694	13,454	5,907	6,975	3,200	975	20,475
Average yield per acre	,,	11.08	3.15	6.28	8.34	6.60	9.03	8.24
Sugar produced ..	,,	4,642	1,507	678	704	..	..	2,499

During the 1939–45 War the area under sugar-beet declined steadily from 4,268 acres in 1938–39 to 108 acres in 1945–46 but increased to more than 600 acres in 1946–47. Much of this decline was due to the diversion, as a war-time measure, of many areas to the production of vegetables. The mill at Maffra ceased operations at the end of 1943 but re-opened to treat the 1946–47 crop.

3. **Sugar Bounties.**—Reference is made to the various Acts in connexion with sugar bounties and sugar excise tariffs in early issues of the Official Year Book. (*See* No. 6 pp. 394–6.)

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter are also referred to in the Official Year Book. (*See* No. 18, p. 720.)

5. **Sugar Agreement in Australia—Embargo on Imports, etc.**—By agreement between the Commonwealth and Queensland Governments in 1925 the embargo on the importation of foreign sugar, which was first introduced in September, 1915, was extended for three years from 1st September, 1925. The price of raw sugar needed for home consumption was fixed at £27 per ton, £1 of which was to defray administrative and general expenses of the Sugar Board and to provide special concessions to certain consumers of sugar. The embargo was later extended, on practically the same terms as previously, for a further period of three years until 1st August, 1931.

In response to representations the Commonwealth Government appointed a Committee of Inquiry on the 23rd August, 1930, to report on the industry. The Committee consisted of eight members representing the various interests concerned. The reports of the Committee were made available in March, 1931, and the renewal of the sugar agreement, with certain modifications, was recommended. The terms of the new agreement closely followed those previously in force, particularly as regards the embargo on imports and the fixation of prices. The assistance to the fruit industry was increased from an average of £180,000 per annum to £315,000 by way of grant from the sugar industry. The agreement was signed on 1st June, 1931, and was to remain in force for a period of five years from 1st September, 1931. In 1932, however, conferences arranged between the Commonwealth Government and representatives of the industry agreed to a reduction of ½d. per lb. in the retail price of sugar from 1st January, 1933 until the end of the period of the agreement (31st August, 1936). It was also decided to reduce the amount of the assistace to the fruit industry to £200,000. A renewal of the agreement for a period of five years commencing 1st September, 1936, was negotiated between the Commonwealth and Queensland Governments in July, 1935, and in May, 1940 the agreement was extended for a further period of five years to 31st August, 1946. The wholesale and retail prices of sugar remained unaltered but the concession to the fruit industry was increased to £216,000 in 1936. The agreement was extended in April, 1946 for a further five years to 31st August, 1951, but in December, 1947, it was amended, the wholesale and retail prices of sugar being increased in response to representations made by a delegation of the sugar industry.

6. **International Sugar Agreement.**—Delegates of 21 Nations representing 90 per cent. of producers met in London and entered into an agreement on 6th May, 1937, providing for the regulation of the production and marketing of sugar in the world during a period of five years from 1st September, 1937. The object of the agreement was to ensure an adequate supply of sugar at a price not exceeding the cost of production, including a reasonable profit to efficient producers. For this purpose, each country was given a basic annual export quota which would be increased in proportion to any expansion in sugar consumption. By this means and by limitations on stocks and measures to encourage more consumption it is expected that the International Sugar Council, which has been established to administer the agreement, will be able to hold in proper balance the supplies and requirements of sugar. The export quota originally allotted to Australia was 400,000 long tons. This figure may be increased, however, where the delivery from any British Colony falls short of its quota. In such circumstances, the deficiency may be allocated among other producing countries of the Empire including Australia.

This agreement, which normally would have expired on 31st August, 1942, has proved of great benefit to Australia. In 1943 fourteen of the original 21 Nations signed a protocol continuing the agreement for another two years ending 31st August, 1944. Three further protocols have since been signed, each extending the agreement for a period of one year. After the outbreak of war in September, 1939, certain clauses of the agreement were declared inoperative because of the difficulties arising therefrom.

7. **Net Return for Sugar Crop.**—Calculations by the Sugar Board regarding the disposal of the crop, net value of exports and the average price realized during each of the years 1938–39 and 1942–43 to 1945–46 will be found in the following table :—

SUGAR : NET RETURNS, AUSTRALIA.

Year.	Percentage Exported. (a)	Net Value of Exports per Ton. (a)	Average Price per ton for Whole Crop. (a)	Estimated Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£
1938–39	55·78	8 4 3	15 3 11	12,806,376
1942–43	31.92	10 16 3	18 18 5	11,762,432
1943–44	17.12	13 2 6	20 18 4	12,554,579
1944–45	32.19	15 0 6	19 16 3	12,417,262
1945–46	31·53	16 17 9	20 6 5	13,674,661

(a) As supplied by the Queensland Sugar Board.

The estimated value of the raw sugar produced has been taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas less refining costs, freight, administrative charges, etc., and export charges, but not deducting concessions to the fruit industry and other rebates which in 1945–46 amounted to £216.000. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

8. **Imports and Exports of Sugar.**—Particulars showing the imports and exports of cane sugar for the years 1938–39 and 1942–43 to 1946–47 are as follows :—

SUGAR : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£A.	Tons.	£A.	Tons.	£A.
1938–39	42	883	443,021	4,177,741	442,979	4,176,858
1942–43	..	5	66,332	1,001,353	66,332	1,001,348
1943–44	..	..	95,826	1,523,786	95,826	1,523,786
1944–45	..	4	114,011	1,853,628	114,011	1,853,624
1945–46	..	3	150,972	3,059,599	150,972	3,059,596
1946–47	..	25	117,379	2,717,252	117,379	2,717,227

9. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXIV. " Manufacturing Industry ". A distillation plant erected at Sarina, near Mackay, was opened in 1927 for the production of power alcohol.

Boards are now being made from the residuum of crushed fibre after the removal of the sugar content from sugar-cane. These boards are used in the building industry for walls and ceilings and possess high insulating and sound-absorbing properties.

10. **Sugar Prices.**—The prices of sugar in Australia are shown in the following table. These prices have been fixed in accordance with the agreements referred to on pages 940–1.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar 94 Net Titre. Average Price per Ton received for—			Refined Sugar.		
	Home Consumption.	Exports. (a)	Whole Crop. (a)	Date of Determination.	Wholesale Price per ton.	Retail Price per lb.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1931 ..	26 19 0	9 7 0	18 2 11	19.7.15 to 15.1.16	25 10 0	3
1932 ..	25 2 3	8 5 0	18 17 0	16.1.16 to 30.6.17	29 5 0	3½
1933 ..	23 18 6	8 0 6	16 6 3	1.7.17 to 24.3.20	29 5 0	3½
1934 ..	24 0 0	7 11 3	15 13 9	25.3.20 to 30.6.20	49 0 0	6
1935 ..	24 0 0	7 18 9	16 5 11	1.7.20 to 31.10.22	49 0 0	6
1936 ..	24 2 0	7 19 0	15 7 4	1.11.22 to 30.6.23	42 0 0	5
1937 ..	24 0 0	8 6 0	15 7 6	1.7.23 to 21.10.23	42 0 0	5
1938 ..	24 0 0	8 4 3	15 3 11	22.10.23 to 31.8.25	37 11 4	4½
1939 ..	23 12 6	10 7 6	15 17 7	1.9.25 to 31.8.31 ..	37 6 8	4½
1940 ..	23 1 0	11 5 6	17 2 11	1.9.31 to 4.1.33 ..	37 6 8	4½
1941 ..	22 13 0	10 18 9	17 18 11	5.1.33 to 31.8.36 ..	33 4 0	4
1942 ..	22 14 6	10 16 3	18 18 5	1.9.36 to 31.8.41 ..	33 4 0	4
1943 ..	22 10 6	13 2 6	20 18 4	1.9.41 to 31.8.46 ..	33 4 0	4
1944 ..	22 2 0	15 0 6	19 16 3	1.9.46 to 3.12.47	33 4 0	4
1945 ..	21 18 0	16 17 9	20 6 5	4.12.47 to 31.8.51	37 6 8	4½

(a) Including " Excess " Sugar.

11. **War and Post-war Arrangements.**—After the outbreak of war in September, 1939, the British Ministry of Food concluded arrangements with the Queensland Goverment for the purchase of Australia's surplus production of raw sugar for the season 1939. The price was fixed at £Stg.7 10s. per ton at United Kingdom ports plus the preference on dominion sugar of £Stg. 3 15s. per ton under the existing tariff.

Similar agreements were negotiated for the disposal of the surplus raw sugar in subsequent seasons, the price in sterling currency per ton c.i.f. United Kingdom ports, basic 96° polarization being as follows :—1940 and 1941, £12 12s. 6d.; 1942, £13 15s. ; 1943, £14 5s. ; 1944, £15 5s. and 1945, £17 5s., inclusive of the existing preference of £3 15s. From the 1st January, 1946 the price was further increased by £Stg. 2 5s. per ton and the United Kingdom agreed to absorb an additional 12s. 6d. per ton on the freight cost.

The United Kingdom is to continue the bulk purchase of exportable sugar from Dominions and Colonies up to and including 1949. From 1947 an increase of £Stg. 4 15s. per ton operated, bringing the export price up to £Stg.24 5s.

§ 16. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area of vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped New South Wales in the area of this crop. . In Western Australia an expansion of area under vineyards has occurred in recent years, but in Queensland, where vine-growing has been carried on for many years, little progress has been made. The purposes for which grapes are grown in Australia are (*a*) for wine-making, (*b*) for table use, and (*c*) for drying. The total area of vines in the several States during each of the years 1938–39 and 1942–43 to 1945–46 and the averages for the ten-year periods ended 1938–39 and 1945–46 are shown in the following table :—

VINEYARDS : AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average 10 seasons ended 1938–39 ..	15,777	40,563	2,142	54,156	5,666	..	118,304
1938–39	16,979	42,436	2,793	58,020	6,277	2	126,507
1942–43	16,302	42,634	3,040	58,202	10,126	3	130,307
1943–44	16,001	42,711	2,998	57,261	10,240	2	129,213
1944–45	15,891	42,914	3,032	56,925	10,117	2	128,881
1945–46	15,983	42,843	3,003	57,440	9,583	3	128,855
Average 10 seasons ended 1945–46 ..	16,455	42,570	2,959	57,606	8,297	2	127,889

The total area of vines in Australia has shown a substantial expansion since 1860. This development has been interrupted periodically, decreases occurring in 1896, in the years between 1904 and 1910, and in 1914. Since the latter year the area increased without interruption from about 61,000 acres to more than 114,000 acres in 1924–25, due largely to the planting of varieties suitable for drying. Subsequently the area fluctuated around 114,000 acres but commenced to increase again in 1933–34. Since then the expansion has continued, reaching the record area of 130,307 acres in 1942–43. A slight decline has occurred in each of the years 1943–44 to 1945–46, the acreage in the latter year being 128,855 acres.

(ii) *Report on the Wine Industry.* An investigation into conditions in the wine industry was undertaken by the Commonwealth Director of Development and the Senior Inspector of Excise, Department of Trade and Customs, and a comprehensive report was presented to Parliament on the 17th July, 1931.

During 1944 the Minister for Trade and Customs referred a number of matters to the Tariff Board for inquiry and report. Subsequently four reports were issued during 1944–45 which dealt with the following subjects, viz. :—Use of cane sugar in sauterne, spirit for fortification of wine, prices for grapes and fortifying spirit and control of liquor order.

(iii) *Wine Production, Bounties, etc.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant. Production for the ten years ended 1945–46 averaged 18.2 million gallons compared with 16.4 million gallons produced during the ten years ended 1935–36. This seems to arise from two causes. In the first place, Australians are not a wine-drinking people ; it is estimated that prior to the 1939–45 War they consumed approximately 4.1 million gallons only or 0.6 gallons per head per annum and consequently the local market is restricted. On this point, however, the quantity of wine released annually for home consumption during the war years increased to 7 million liquid gallons or the equivalent of about 1 gallon per head of population. Secondly, the comparatively new and unknown wines of Australia must compete in the markets of the old world with the well-known and long-established brands from other countries. Continued efforts are being made to bring the Australian wines under notice both here and abroad and with the assistance of a Commonwealth bounty on the export of fortified wine of specified strength, the industry has been greatly stimulated. Further development, however, was interrupted by the war. The loss of the United Kingdom market due to the lack of shipping space placed the wine industry of Australia in a most difficult position, but this was partly offset by the increase in local consumption due to the availability of supplies, the restriction on the production of beer and the presence of large numbers of defence personnel.

Particulars of the Wine Export Bounty are shown in § 20 hereafter. The Wine Export Bounty Act 1930 which provided for payment at the rate of 1s. 9d. per gallon was replaced in 1934 by a new Act which fixed the rate at 1s. 3d. per gallon for the two years ending 28th February, 1937, and thereafter at a reduction of 1d. per gallon for each succeeding year until 1940. The payment of a bounty at the rate of 1s. per gallon for a period of five years to 28th February, 1945, subsequently extended to 28th February, 1947, was provided for under the Wine Export Bounty Act of 1939–1944.

The quantity of wine produced in the several States during the 1938–39 and 1942–43 to 1945–46 seasons, together with the averages for the ten year periods ended 1938–39 and 1945–46, is shown in the following table :—

WINE : PRODUCTION.

('000 omitted.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Average 10 seasons ended 1938–39 ..	2,099	1,449	36	12,349	397	16,330
1938–39 ..	2,502	825	45	11,147	439	14,958
1942–43 ..	2,721	1,382	44	15,203	514	19,864
1943–44 ..	3,530	1,320	27	14,435	553	19,865
1944–45 ..	2,579	785	22	10,573	460	14,419
1945–46 ..	2,968	1,916	35	20,213	726	25,858
Average 10 seasons ended 1945–46 ..	2,836	1,298	32	13,606	464	18,238

2. Imports and Exports of Wine.—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The imports for the five years ended 1946–47 compared with 1938–39 are shown hereunder :—

WINE : IMPORTS INTO AUSTRALIA.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total
	Gallons.	Gallons.	Gallons.	£A.	£A.	£A.
1938–39 ..	10,759	30,451	41,210	23,303	22,792	46,095
1942–43 ..	3	59	62	63	82	145
1943–44 ..	..	755	755	..	1,319	1,319
1944–45 ..	100	..	100	145	..	145
1945–46 ..	40	479	519	234	1,574	1,808
1946–47 ..	1,719	1,585	3,304	8,690	3,340	12,030

(ii) *Exports.* Before the 1939–45 War practically all wine exported was sent to the United Kingdom, only 200,000 gallons (approximately) being sent elsewhere. Exports in 1946–47 totalled 2,720,599 gallons of which the United Kingdom received 2,041,804 gallons; Canada, 186,725 gallons; New Zealand, 152,194 gallons; New Caledonia, 94,522 gallons; and other countries 245,354 gallons.

Exports for the years 1938–39 and 1942–43 to 1946–47 are shown in the following table :—

WINE : EXPORTS FROM AUSTRALIA.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£A.	£A.	£A.
1938–39 ..	2,369	3,718,135	3,720,504	3,507	978,570	982,077
1942–43 ..	9,918	807,097	817,015	12,136	284,907	297,043
1943–44 ..	10,306	1,235,095	1,245,401	6,966	415,966	422,932
1944–45 ..	6,254	1,544,714	1,550,968	7,735	587,563	595,298
1945–46 ..	7,984	1,776,452	1,784,436	10,619	729,969	740,588
1946–47 ..	3,244	2,717,355	2,720,599	4,975	1,176,626	1,181,601

3. Overseas Marketing of Wine.—(i) *The Wine Overseas Marketing Act* 1929–1945. This Act was introduced at the request of the viticultural interests in Australia with the object of placing the overseas marketing of Australia's surplus wine on an orderly basis. The Wine Overseas Marketing Board was appointed to supervise the exports, and the sale and distribution after export, of Australian wine.

The name of the Board was changed to the Australian Wine Board in 1936. An amendment to the Act in 1945 made provision for eleven members on the Board, comprising five representatives of proprietary and privately-owned wineries and distilleries, two representatives of co-operative wineries and distilleries, three representatives of grape-growers supplying to wineries and distilleries, and one representative of the Commonwealth Government. No wine may be exported except by means of a licence which is issued under conditions recommended to the Minister by the Board; these include the withholding of shipments as directed by the Board. The Board has a London agency which advises on marketing conditions. The methods of marketing adopted by the Board have resulted in the widening of the distribution of Australian wines overseas.

(ii) *The Wine Grapes Charges Act* 1929–1941. This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 7 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes grown during the seasons 1938–39 and 1942–43 to 1945–46 and the averages for the ten year periods ended 1938–39 and 1945–46 are as follows :—

TABLE GRAPES : PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	4,354	3,884	2,060	738	2,874	13,910
1938–39	4,034	4,089	2,313	985	3,139	14,560
1942–43	5,186	4,123	2,621	1,218	3,194	16,342
1943–44	5,325	4,067	2,696	1,150	3,240	16,478
1944–45	4,363	5,255	2,237	917	2,903	15,675
1945–46	4,817	4,133	3,120	1,036	2,342	15,448
Average 10 seasons ended 1945–46 ..	4,732	4,182	2,515	1,032	2,782	15,243

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1938–39 and 1942–43 to 1945–46 and the averages for the ten-year periods ended 1938–39 and 1945–46 are shown in the following table. The production of 103,410 tons for the 1943–44 season represents the greatest output recorded in any year. Due to adverse seasonal conditions, heavy crop losses occurred during the three succeeding years. Production in 1944–45 amounted to 68,857 tons, to 73,840 tons in 1945–46 and to 65,197 tons in 1946–47.

RAISINS(*a*) AND CURRANTS : PRODUCTION.

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Average 10 seasons ended 1938–39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1938–39 ..	4,837	1,239	33,659	10,301	11,656	9,569	737	2,762	50,889	23,871
1942–43 ..	7,528	1,360	46,439	8,620	15,263	9,253	674	2,329	69,904	21,562
1943–44 ..	7,719	1,488	48,851	9,987	20,739	10,457	835	3,334	78,144	25,266
1944–45 ..	5,053	1,064	33,076	6,858	12,344	6,896	674	2,892	51,147	17,710
1945–46 ..	6,859	922	42,995	6,435	8,819	4,467	815	2,528	59,488	14,352
Average 10 seasons ended 1945–46 ..	6,496	1,226	42,698	8,477	14,321	8,411	685	2,548	64,200	20,662

(*a*) Sultanas and lexias.

5. **Production and Disposal of Dried Vine Fruit.**—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export overseas. Details of the quantities disposed of in Australia and overseas are given in the table below. The quantities disposed of to civilians include amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

DRIED VINE FRUIT : QUANTITIES DISPOSED OF, AUSTRALIA.

Season ended December—	Australia.			Overseas.					Grand Total.
	Civilians.	Services.	Total.	United Kingdom.	Canada.	New Zealand.	Other Countries.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1942.. ..	16,500	5,000	21,500	44,000	20,000	5,650	1,050	70,700	92,200
1943.. ..	20,921	4,283	25,204	42,810	15,830	5,770	761	65,171	90,375
1944.. ..	29,951	5,120	35,071	44,570	16,000	6,756	1,820	69,146	104,217
1945.. ..	20,779	3,636	24,415	21,500	15,000	5,548	1,569	43,617	68,032
1946.. ..	(a)	(a)	20,549	32,000	14,000	5,000	844	51,844	72,393
1947(b) .	(a)	(a)	19,000	21,262	10,988	4,250	500	37,000	56,000

(a) Not available separately. (b) Estimated. Subject to revision.

6. **Exports of Raisins and Currants.**—The following table shows the oversea exports of raisins and currants during each of the five years ended 1946–47 compared with 1938–39. As the quantities of imports were practically negligible they have been omitted.

RAISINS AND CURRANTS : EXPORTS, AUSTRALIA.

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£A.	Tons.	£A.	Tons.	£A.
1938–39 ..	49,550	1,974,045	23,759	772,966	73,309	2,747,011
1942–43 ..	46,731	1,813,713	11,240	358,039	57,971	2,171,752
1943–44 ..	56,039	2,449,050	18,994	714,315	75,033	3,163,365
1944–45 ..	56,418	2,647,719	20,994	828,330	77,412	3,476,049
1945–46 ..	30,022	1,547,688	9,307	403,645	39,329	1,951,333
1946–47 ..	35,248	1,913,574	5,606	243,508	40,854	2,157,082

Since 1912 Australia has not only produced sufficient raisins and currants for home consumption but has been able to maintain a large export trade. The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, the quantities exported thereto in 1946–47 being respectively 24,163, 10,880 and 4,763 tons or 59, 26 and 12 per cent. respectively. Exports to Canada increased from 4,600 tons in 1928–29 to 16,944 tons in 1939–40 and to 25,955 tons in 1944–45, but decreased to 10,880 tons in 1946–47.

7. **War-time Contract.**—At the outbreak of war in 1939 the Government of the United Kingdom purchased all available surpluses after provision had been made for Canadian and New Zealand requirements. During the 1944 and 1945 seasons prices fixed under these contracts represented a substantial increase over pre-war prices.

8. **Post-war Contract.**—A long term agreement has been negotiated between the Governments of the Commonwealth and the United Kingdom for the purchase of the exportable surplus of the dried vine fruit crop for the 1946, 1947 and 1948 seasons. The contract prices for currants, sultanas and lexias sold to the United Kingdom during the war years 1942 to 1945, as well as the prices fixed under the post-war contract covering the years 1946 to 1948, are shown in the following table.

DRIED VINE FRUITS : CONTRACT PRICES PER TON TO UNITED KINGDOM.

(Basis : F.o.b. Australian Ports.)

Fruit.	Grade.	1942.			1943.			1944.			1945.			1946 to 1948.		
		£A.	*s.*	*d.*	£A.	*s.*	*d.*	£A.	*s.*	*d.*	£A.	*s.*	*d.*	£A.	*s.*	*d.*
Currants ..	1 Crown and upwards ..	35	0	0	37	16	3	41	11	3	43	2	6	50	0	0
Sultanas ..	1 Crown and upwards ..	47	3	9	51	5	0	55	0	0	56	11	3	65	0	0
Lexias ..	4 and 5 Crown ..	49	7	6	50	12	6	54	7	6	55	18	9	64	7	6

9. **Overseas Marketing of Dried Fruits.**—(i) *The Dried Fruits Export Control Act* 1924–1938. This Act was passed by the Commonwealth Parliament at the request of the dried fruits industry to organize the overseas marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of eight members—including five growers' representatives, two members with commercial experience and one Government nominee—was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. In conjunction with its London agency, the Board has improved the marketing of Australian dried fruits overseas, and has increased the demand for the product. Its system of appraisement has resulted in more satisfactory realizations. Its methods of ensuring continuity of supply and regulating shipments and its participation in the advertising campaign of the Australian Overseas Trade Publicity Committee have benefited the industry considerably. No dried fruits may be exported except by means of a licence, which is issued subject to conditions recommended by the Board.

(ii) *Dried Fruits Export Charges Act* 1924–1929. This Act provides for the imposition of a levy on all sultanas, currants and lexias exported from Australia for the purpose of defraying the administrative expenses of the Board and the cost of advertising, etc. The rate of the levy is fixed by regulation. Under an amendment made in 1927 provision was made for the exemption of sultanas, currants and lexias from the levy upon recommendations by the Board.

(iii) *The Dried Fruits Act* 1928–1935. In previous issues of the Official Year Book reference has been made to the Dried Fruits Act and its provisions have been outlined (*see* p. 894 of Official Year Book, No. 28).

§ 17. Orchards and Fruit-Gardens.

1. **Area.**—The greatest area of orchards and fruit-gardens was attained in 1933–34 when 281,989 acres were planted. From that year until 1942–43, when 260,384 acres were under fruit, there was a gradual decline. Since 1942–43 there has been an upward movement to 269,823 acres in 1945–46. The total area of orchards and fruit-gardens in the several States during the years 1938–39 and 1942–43 to 1945–46 is shown in the following table :—

ORCHARDS AND FRUIT-GARDENS : AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1938–39..	85,598	71,300	32,641	28,943	22,029	31,580	50	97	272,238
1942–43..	79,363	69,776	29,029	29,478	21,266	31,337	..	135	260,384
1943–44..	81,283	70,024	31,878	25,521	21,154	32,135	..	105	262,100
1944–45..	82,230	68,245	32,133	26,484	21,060	32,350	..	97	262,599
1945–46..	84,062	69,479	34,946	27,223	21,730	32,284	..	99	269,823

2. **Varieties of Crops.**—(i) *General.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, papaw, mango and guava of the tropics to the strawberry, the raspberry and the currant of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In Queensland, the banana, pineapple, apple, orange, mandarin, peach, and plum are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, lemon, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies over two-thirds of the fruit-growing area, but small fruits, such as the currant, raspberry and gooseberry, are extensively grown, while the balance of the area is mainly taken up with the pear, apricot and plum. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

(ii) *Area.* The table hereunder shows the total acreage for 1945–46 :—

ORCHARDS AND FRUIT-GARDENS : AREA, 1945–46.

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Apples	13,893	21,721	5,385	8,130	12,940	22,240	68	84,377
Apricots ..	1,821	4,719	320	3,577	505	1,499	4	12,445
Bananas ..	16,938	..	9,432	..	217	..	..	26,587
Cherries.. ..	2,614	1,454	5	1,052	9	103	1	5,238
Citrus—								
Oranges ..	21,656	4,964	3,163	4,283	3,364	..	..	37,430
Mandarins ..	2,500	120	1,791	120	205	..	..	4,736
Lemons ..	3,381	2,259	457	408	578	..	..	7,083
Other.. ..	965	277	386	159	181	..	..	1,968
Nuts	879	615	275	2,917	325	..	2	5,013
Peaches ..	8,215	14,493	1,474	1,445	838	117	6	26,588
Pears	3,704	13,163	390	1,811	1,030	2,512	6	22,616
Pineapples ..	202	..	7,703	..	..	..	..	7,905
Plums and Prunes	4,629	3,415	1,183	1,906	914	359	7	12,413
Other Small Fruits	14	586	138	335	27	5,390	..	6,490
Other Fruits ..	2,651	1,693	2,844	1,080	597	64	5	8,934
Total ..	84,062	69,479	34,946	27,223	21,730	32,284	99	269,823

(iii) *Production.* (*a*) *Quantities.* The production in 1945–46 is shown in the next table :—

ORCHARDS AND FRUIT-GARDENS : PRODUCTION, 1945–46.

Fruit.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples ..	bushel	1,180,442	2,597,618	413,537	1,001,237	1,547,658	8,522,210	4,512	15,267,214
Apricots ..	,,	233,107	336,871	22,012	414,321	35,920	64,520	117	1,106,868
Bananas ..	,,	1,960,381	..	645,684	..	15,423	..	..	2,621,488
Cherries ..	,,	160,286	44,064	38	35,511	352	6,970	17	247,238
Citrus—									
Oranges ..	,,	1,968,745	594,888	233,370	836,242	315,432	..	..	3,948,677
Mandarins ..	,,	179,175	12,072	164,185	24,643	14,747	..	..	394,822
Lemons ..	,,	332,450	109,463	75,807	28,523	97,487	..	..	643,730
Other ..	,,	125,434	48,602	41,343	26,607	19,778	..	..	261,764
Nuts ..	lb.	211,024	199,579	61,214	1,345,680	44,964	..	27	1,862,488
Peaches ..	bushel	701,367	1,086,841	85,844	148,057	61,294	11,270	140	2,094,813
Pears ..	,,	323,981	1,464,075	40,871	193,357	96,993	524,370	127	2,643,774
Pineapples ..	dozen	15,051	..	1,642,696	..	..	..	..	1,657,747
Plums and Prunes	bushel	370,236	228,703	85,862	139,802	79,345	45,180	117	949,245
Other Small Fruits	cwt.	24	9,751	2,467	5,449	287	117,998	..	135,976

(*b*) *Gross Values.* The gross value of production for the various classes of fruit for the year 1945–46 is shown in the following table :—

ORCHARDS AND FRUIT-GARDENS : GROSS VALUE OF PRODUCTION, 1945–46.

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Apples ..	905,690	1,039,047	422,229	551,506	444,080	1,470,250	3,497	4,836,299
Apricots ..	390,340	168,436	36,757	228,249	47,893	22,580	199	894,454
Bananas ..	2,496,420	..	715,675	..	44,427	..	..	3,256,522
Cherries ..	507,850	66,096	143	71,022	2,006	4,010	55	651,182
Citrus—								
Oranges ..	1,634,120	510,397	194,620	668,307	154,379	..	..	3,161,823
Mandarins ..	152,250	12,525	136,699	27,005	10,661	..	..	339,140
Lemons ..	244,100	93,044	46,186	20,441	44,029	..	..	447,800
Other ..	58,250	25,314	25,118	16,385	11,040	..	..	136,107
Nuts ..	14,850	13,699	2,295	63,479	2,913	..	2	97,238
Peaches ..	524,350	516,249	85,847	102,119	62,315	2,540	158	1,293,578
Pears ..	256,090	658,834	21,647	74,242	25,652	131,090	116	1,167,671
Pineapples ..	8,550	..	792,017	..	..	..	..	800,567
Plums and Prunes ..	378,420	87,526	96,386	64,234	64,357	10,530	128	701,581
Other Small Fruits	70	40,404	37,550	32,027	4,974	250,040	..	365,065
Other Fruits ..	202,220	52,627	218,800	85,565	40,375	1,180	90	600,857
Total ..	7,773,570	3,284,198	2,831,969	2,004,581	959,101	1,892,220	4,245	18,749,884

3. **Principal Fruit Crops.**—(i) *Area.* The area in Australia of the principal fruit crops for each of the years 1938–39 and 1942–43 to 1945–46 is shown hereunder :—

PRINCIPAL FRUIT CROPS : AREA, BEARING AND NON-BEARING, AUSTRALIA.

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1938–39 ..	97,351	11,620	22,900	46,955	25,054	21,587	14,119
1942–43 ..	87,672	12,137	20,158	50,311	25,109	22,196	12,443
1943–44 ..	86,069	12,353	20,504	50,053	26,996	22,425	12,742
1944–45 ..	83,968	12,300	23,564	49,534	26,464	22,569	12,357
1945–46 ..	84,377	12,445	26,587	51,217	26,588	22,616	12,413

(ii) *Production.* (*a*) *Quantities.* In the next table the production of the principal varieties of fruit grown in Australia is shown for the same periods :—

PRINCIPAL FRUIT CROPS : PRODUCTION IN AUSTRALIA.

('000 omitted.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1938–39 ..	11,126	987	2,494	5,644	2,523	2,300	771
1942–43 ..	9,851	1,111	2,408	4,180	2,036	2,837	927
1943–44 ..	14,523	1,433	2,262	5,332	2,573	2,684	1,171
1944–45 ..	10,468	881	2,129	5,657	2,173	2,922	729
1945–46 ..	15,267	1,107	2,621	5,249	2,095	2,644	949

(*b*) *Values.* The gross value of the principal fruit crops during the periods 1938–39 and 1942–43 to 1945–46 is shown in the following table :—

PRINCIPAL FRUIT CROPS : GROSS VALUE OF PRODUCTION, AUSTRALIA.

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
	£	£	£	£	£	£	£
1938–39 ..	3,357,817	328,617	1,206,879	1,916,912	737,791	674,887	232,681
1942–43 ..	3,364,691	690,332	2,131,309	3,281,856	1,084,036	1,098,863	595,374
1943–44 ..	4,869,367	899,892	3,016,013	4,698,099	1,357,242	1,114,797	817,065
1944–45 ..	3,528,787	600,115	3,035,460	4,406,520	1,241,020	1,305,727	559,236
1945–46 ..	4,836,299	894,454	3,256,522	4,084,870	1,293,578	1,167,671	701,581

4. **Imports and Exports of Fruit.**—(i) *General.* The imports of fresh fruits into Australia are negligible whilst those of dried fruits consist mainly of dates.

A considerable export trade in both fresh and dried fruits is carried on by Australia with oversea countries. The values of the shipments in 1946–47 amounted to £1,549,890 and £2,430,584 respectively. Apples formerly constituted the bulk of the fresh fruit exported although the exports of citrus fruits and pears were fairly considerable. Shipments of raisins and currants have increased greatly since 1914–15, and are mainly responsible for the growth in the dried fruits exports although dried tree fruits also figure amongst the exports.

(ii) *Fresh Fruits.* Particulars of the Australian oversea trade in fresh fruits are shown in the following table :—

FRESH FRUITS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£A.	Centals.	£A.	Centals.	£A.
1938–39 ..	69,883	29,843	2,752,437	2,022,936	2,682,554	1,993,093
1942–43 ..	1,959	2,370	133,284	191,129	131,325	188,759
1943–44 ..	596	1,118	135,081	315,329	134,485	314,211
1944–45 ..	789	1,895	179,297	318,351	178,508	316,456
1945–46 ..	1,088	3,417	813,179	1,264,681	812,091	1,261,264
1946–47 ..	5,459	4,068	673,485	1,549,890	668,026	1.545,822

(iii) *Exports of fresh Apples, Pears and Citrus Fruits.* The quantity and value of fresh apples, pears and citrus fruits exported during each of the years 1938–39 and 1942–43 to 1946–47 are shown in the following table :—

FRESH APPLES, PEARS AND CITRUS FRUITS : EXPORTS FROM AUSTRALIA.

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£A.	Centals.	£A.	Centals.	£A
1938–39 ..	2,111,139	1,433,440	294,930	264,805	274,229	221.184
1942–43 ..	10,434	19,024	1,073	1,974	117,908	165,830
1943–44 ..	21,401	45,563	2,988	7,594	107,386	255,703
1944–45 ..	70,257	98,704	179	316	103,804	210,356
1945–46 ..	698,185	1,010,243	20,938	54,412	68,468	135,027
1946–47 ..	387,458	766,007	80,736	176,490	167,910	438,627

(iv) *Dried Fruits.* The quantity and value of overseas imports and exports of dried fruits, other than raisins and currants, for the five years ended 1946–47 compared with 1938–39 are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq. This trade was prohibited during the war years but has since been resumed.

DRIED FRUITS(*a*) : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£A.	'000 lb.	£A.	'000 lb.	£A.
1938–39 ..	11,097	80,752	3,927	117,814	−7,170	37,062
1942–43 ..	23	323	2,428	105,265	2,405	104,942
1943–44 ..	24	725	3,631	131,188	3,607	130,463
1944–45 ..	6,626	156,009	1,860	95,239	−4,766	−60,770
1945–46 ..	7,556	164,912	3,078	198,087	−4,478	33,175
1946–47 ..	7,070	165,621	4,214	273,502	−2,856	107,881

(*a*) Excludes raisins and currants referred to separately under Vineyards, § 16, par. 6.
NOTE.—Minus sign (−) denotes net imports.

(v) *Jams and Jellies.* Jams and jellies were exported in large quantities during the 1914–18 War, the record shipment of 79,277,560 lb., valued at £1,847,970, being dispatched from Australia during 1918–19. Exports during the 1939–45 War did not reach the record dimensions obtained during the 1914–18 War. Australian and Allied Services based upon Australia had prior claims upon Australia's output of jam, with the result that the exportable surplus, after meeting civil needs, was much reduced. Exports reached their highest level in 1940–41, before the outbreak of war in the Pacific, when nearly 45 million lb. of jam were exported. Peak production occurred in 1943–44 and amounted to 171 million lb. compared with the peak of the 1914–18 War of 136 million lb. in 1918–19. Particulars of imports and exports during each of the years 1938–39 and 1942–43 to 1946–47 are as follows :—

JAMS AND JELLIES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£A.	'000 lb.	£A.	'000 lb.	£A.
1938–39 ..	81	3,253	13,872	262,486	13,791	259,233
1942–43 ..	42	1,359	18,276	498,097	18,234	496,738
1943–44 ..	..	5	21,638	557,161	21,638	557,156
1944–45 ..	..	1	27,661	692,056	27,661	692,055
1945–46 ..	..	..	42,183	1,310,412	42,183	1,310,412
1946–47 ..	..	4	65,434	2,206,696	65,434	2,206,692

(vi) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1946–47 was £A.537. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938–39 amounting to £A.1,271,525. Exports were considerably reduced during the recent war owing to the prior claims on Australia's output by the Australian and Allied Services based on Australia, but in 1946–47 the value of exports had increased to £A.2,114,248. In addition, the exports of pulped fruits during 1946–47 amounted to

£446,335. Particulars of the quantities and value of fruit preserved in liquid exported from Australia in 1938–39 and each year 1942–43 to 1946–47 are shown in the following table :—

FRUIT PRESERVED IN LIQUID : EXPORTS FROM AUSTRALIA.

Year.	Apricots.	Peaches.	Pears.	Other.	Total.
			QUANTITIES ('000 lb.)		
1938–39	9,484	44,383	20,858	6,753	81,478
1942–43	231	3,833	1,171	8,211	13,446
1943–44	1,204	8,351	4,817	6,797	21,169
1944–45	2,274	11,662	3,008	4,763	21,707
1945–46	2,999	18,208	7,404	8,171	36,782
1946–47	5,645	43,331	19,259	3,454	71,689
			VALUES (£A.)		
1938–39	161,358	627,748	332,668	149,751	1,271,525
1942–43	5,619	79,687	25,228	179,091	289,625
1943–44	30,968	210,075	122,714	166,586	530,343
1944–45	50,036	256,766	61,985	139,321	508,108
1945–46	72,323	393,467	154,393	272,677	892,860
1946–47	167,400	1,190,687	636,130	120,031	2,114,248

5. **Marketing of Apples and Pears.**—(i) *Apple and Pear Organization Act* 1938–1947. This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board for the purpose of organizing and controlling the export trade in fresh apples and pears.

The Board originally comprised sixteen members but by an amendment of the Act in 1947 the members were reduced to twelve, representative of the following interests :—one member to represent the Commonwealth Government ; seven members to represent growers of apples and pears on the basis of two for Tasmania and one each for the other States ; three members to represent exporters of apples and pears on the basis of one each for Tasmania and Western Australia and one for the other States ; and one member to represent the employees engaged in the apple and pear industry.

The Board has power to regulate the shipment of apples and pears from Australia by licensing exporters and issuing permits to export. Power is also given to determine export quotas and to allocate the consignments from each State. The Board may appoint persons to represent it overseas.

The Apple and Pear Publicity and Research Act 1938 and the related Apple and Pear Tax Acts, referred to in earlier issues of the Official Year Book, have now been repealed by the 1947 amendment to the Apple and Pear Organization Act.

(ii) *Apple and Pear Export Charges Act* 1938–1947. This Act provides for the imposition of a levy on all apples and pears exported from Australia for the purpose of providing the funds necessary to meet the administrative and other expenses of the Board.

(iii) *Apple and Pear Acquisition.* Exports of apples and pears have been seriously curtailed as a result of the war and during the 1940 to 1948 seasons crops were acquired and marketed under the National Security (Apple and Pear Acquisition) Regulations and Regulations issued under the Defence (Transitional Provisions) Act 1946. During the 1940 season the scheme was supervised by a Marketing Committee attached to the Australian Apple and Pear Board with committees operating in each State, but from 1941 the operations of the Australian Apple and Pear Board were suspended and the Australian

Apple and Pear Marketing Board was constituted under the National Security (Apple and Pear Acquisition) Regulations to handle and market all apples and pears acquired. The Regulations provide for the acquisition and orderly marketing of apple and pear crops, growers being paid guaranteed advances on fruit acquired. During the 1940, 1941 and 1942 seasons, the acquisition applied to all States but from 1943 to 1948 the scheme has operated only in respect of crops grown in Tasmania and Western Australia. The following table gives details of the total quantity of fruit acquired and the amounts paid to growers as advances on the basis of " bare " fruit in the orchard for the seasons 1942 to 1946. All packing and marketing costs such as cases, packing, transport, cool storage, selling, etc. were paid by the Board :—

State.	1942—No. 3 Acquisition.		1943—No. 4 Acquisition.		1944—No. 5 Acquisition.		1945—No. 6 Acquisition.		1946—No. 7 Acquisition.	
	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.
					APPLES.					
	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000.
N.S.W.(*a*) ..	576	111	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Vic.	1,428	219	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Q'land ..	98	23	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
S. Aust. ..	270	36	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
W. Aust. ..	1,161	156	2,127	327	1,567	239	1,297	240	1,543	223
Tas.	6,354	758	5,738	778	8,027	1,108	6,685	1,036	8,522	1,170
Total ..	(*c*) 9,887	1,303	7,865	1,105	9,594	1,347	7,982	1,276	10,065	1,393
					PEARS. (Other than Canning.)					
	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000.	'000. bus.	£'000
N.S.W. (*a*) ..	158	35	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Vic.	597	117	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Q'land ..	9	2	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
S. Aust. ..	97	17	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
W. Aust. ..	93	17	141	25	77	14	116	26	77	14
Tas.	359	69	387	86	534	104	636	105	521	97
Total ..	(*d*) 1,313	257	528	111	611	118	752	131	598	111

(*a*) Includes Australian Capital Territory. (*b*) Acquisition scheme did not apply. (*c*) Excludes 110,154 bushels sold privately by growers. (*d*) Excludes 6,861 bushels sold privately by growers.

6. **Overseas Marketing of Canned Fruit.**—(i) *The Canned Fruits Export Control Act* 1926–1938. This legislation was introduced at the request of canners and representative organizations of fruit-growers with the object of organizing the oversea marketing of canned fruit. The original Act referred to canned apricots, peaches and pears only, but canned pineapples and canned fruit salads consisting of not less than 75 per cent. of specified fruits were subsequently brought within the scope of the Board's operations. The personnel of the Australian Canned Fruits Board consists of one representative each from proprietary and privately owned canneries, co-operative canneries, State-controlled canneries, pineapple interests and the Commonwealth Government. No canned fruits to which the Act applies are permitted to be exported except under a licence issued in accordance with conditions recommended by the Board. The system of marketing adopted by the Board, including the fixation of minimum selling prices overseas, the appointment of a London agency and the engaging in oversea trade publicity, has resulted in the satisfactory disposal of the annual exportable surplus of canned fruits. The distribution of canned fruits has been widened and the exporting side of the industry placed on a sounder basis through the Board's operations.

(ii) *The Canned Fruits Export Charges Act* 1926–1938. This Act provides for the imposition of a levy on the export of canned fruits to meet the administrative and other commitments of the Board. The rate of the levy is fixed by regulation from time to time. An amendment in 1929 provided for certain exemptions from payment of the levy when recommended by the Board.

(iii) *War-time Contracts.* The exportable surplus from the 1940 pack was subject to an arrangement between the Commonwealth and United Kingdom Governments under which the British Ministry of Food agreed to purchase canned apricots, peaches, and pears at prices fixed on an f.o.b. basis, Australian ports.

In 1941 further purchases were made by the British Ministry of Food for shipment to destinations other than the United Kingdom.

From 1942 onwards, the requirements of the Defence Services and other Governmental orders expanded rapidly and necessitated official control of disposals to ensure that these priority demands were fully met. Commercial shipments of canned fruits virtually ceased and the quantities available for civilian consumption were considerably below normal requirements. Approximately 70 per cent. of the 1945 pack was allocated to meet service and other Governmental demands.

In 1946 commercial shipments were resumed and approximately one million cases of canned fruits were exported to the United Kingdom under an official arrangement which was virtually on a merchant to Government basis. A similar arrangement is in operation in respect of 1947 exports to the United Kingdom.

§ 18. Vegetables for Human Consumption.

1. **Area and Production of Fresh Vegetables.**—The pre-war production of vegetables in Australia, which had been sufficient to meet the needs of the population was, generally speaking, supplied by growers whose holdings were adjacent to centres of consumption. These areas were classified for statistical purposes as market gardens and were tabulated as such. Details of the areas planted and production respecting individual kinds of vegetables were not collected.

Following the outbreak of war in the Pacific in December, 1941 and the establishment of Australia as a base for Australian and Allied Services in the South-West Pacific Area it was evident that the production of fresh vegetables under the conditions then existing would be insufficient to meet the additional demand from the Services. Consequently extensive development of vegetable-growing in Australia was undertaken, resulting in an expansion from the peace-time need of about 100,000 acres to more than 200,000 acres exclusive of potatoes, onions, navy beans and blue peas, details of whose production are referred to in §§ 10, 11 and 12 of this Chapter.

This development was achieved by continuing supplies of vegetables to the civil population from the market gardens already established, by extending production to areas which previously had not grown these crops and by the mechanization of the industry. Farming operations were thus able to be undertaken in many cases on a scale larger than that normally adopted in Australia. In addition, the letting of contracts at guaranteed prices proved an attraction, and the vegetable-growing industry was able to produce the additional quantities necessary to meet the war-time needs of the services as well as those of the civil population.

Details of the area and production of vegetables for the seasons 1943–44 to 1945–46 are given in the following table. Owing to the difference in collection already referred to, comparable figures prior to 1942–43 are not available.

FRESH VEGETABLES(*a*) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1943–44.		1944–45.		1945–46.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French ..	18,376	15,291	20,278	16,533	19,873	15,291
Beetroot	4,009	21,781	4,687	27,674	4,095	20,995
Cabbages	12,030	127,175	13,487	136,937	10,417	104,688
Carrots	13,493	74,379	12,740	83,576	7,044	46,870
Cauliflowers ..	5,737	69,527	6,938	79,765	7,107	77,757
Cucumbers ..	3,003	5,679	3,471	5,637	2,402	3,446
Lettuces	3,461	12,536	4,825	16,242	4,509	15,566
Parsnips	2,207	13,265	2,256	15,598	1,902	13,438
Peas, Green ..	51,581	28,849	74,581	37,928	60,918	30,697
Potatoes, Sweet ..	3,343	11,723	2,453	7,756	1,671	5,584
Pumpkins	29,874	66,234	38,451	84,812	31,227	78,621
Tomatoes	23,731	106,931	25,642	113,950	22,586	91,502
Turnips, Swede ..	11,647	40,442	13,247	49,067	8,251	33,059
All Other	16,116	..	17,226	..	14,521	..
Total ..	198,608	..	240,282	..	196,523	..

(*a*) Excludes potatoes, onions, blue peas and navy beans.

2. **Production of Canned Vegetables.**—As a corollary to the development mentioned above a considerable expansion occurred in the processing of vegetables. New canning factories were established in many parts of the Commonwealth, and a new industry for the processing of vegetables by the dehydration method was commenced. Since the close of hostilities there has been a sharp decline in the output of canned vegetables, but preliminary figures indicate that the quantity canned in 1946–47 (approximately 46 million lb.) was considerably greater than in 1938–39.

The development in the vegetable canning industry is indicated in the table below :—

PRODUCTION OF CANNED VEGETABLES : AUSTRALIA.

Vegetable.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47. (*d*)
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Asparagus	2,150	2,844	2,752	2,555	2,178	2,307
Beans	2,491	10,508	6,137	12,590	10,058	9,056
Beetroot	(*a*)	(*a*)	7,734	16,203	10,903	2,361
Cabbages	(*a*)	(*a*)	13,278	1,009	1,919	175
Carrots	(*a*)	(*a*)	12,789	38,883	18,312	2,989
Cauliflower ..	198	276	201	(*a*)	(*a*)	1,039
Peas	1,861	3,590	9,353	16,751	23,033	18,929
Silver Beet ..	(*a*)	(*a*)	1,794	7,493	2,453	11
Tomatoes	1,578	9,019	7,124	7,417	4,097	5,345
Other (*c*)	(*b*) 1,977	(*b*) 46,331	34,192	(*b*) 16,248	(*b*) 34,009	3,944
Total	10,255	72,568	95,354	119,149	106,962	46,156

(*a*) Included in "Other Vegetables". (*b*) Includes particulars of vegetables marked (*a*). (*c*) Includes Parsnips, Potatoes, Turnips, Sweet Corn, etc. (*d*) Subject to revision.

3. **Production of Dehydrated Vegetables.**—The dehydration of vegetables was not undertaken in Australia until after the outbreak of war in the Pacific towards the close of 1941. The demand for vegetables in this form by Australian and Allied Services made this development a necessity and as a result 33 dehydration plants were erected in all

States except Queensland, in areas where adequate supplies of suitable vegetables were assured. With the termination of Commonwealth contracts for dehydrated vegetables in October, 1946, a number of plants ceased to operate and output for commercial purposes in the remaining plants was drastically curtailed.

In the following table details, as recorded by the Department of Commerce and Agriculture, are given of the quantities of fresh vegetables processed and the output in dehydrated form since the industry was established.

DEHYDRATED VEGETABLES : QUANTITY OF FRESH VEGETABLES USED AND PRODUCTION, AUSTRALIA.

Particulars.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
Quantity Used—	Tons.	Tons.	Tons.	Tons.	Tons.
Beetroot	(a)	392	1,840	1,406	..
Carrots	(a)	9,336	18,984	8,136	..
Cabbages	(a)	10,181	20,213	15,781	220
Onions	(a)	2,295	4,852	5,015	78
Parsnips	(a)	1,042	782	381	9
Potatoes	(a)	18,054	48,979	61,116	8,617
Quantity Produced—	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Beetroot	(b)	70	261	183	..
Carrots	280	1,432	2,831	1,147	..
Cabbages	(b)	891	1,745	1,338	31
Onions	275	472	1,027	875	15
Parsnips	(b)	266	188	85	2
Potatoes	2,092	5,657	14,450	17,979	2,267
Other..	101	..	..	15	..
Total	2,748	8,788	20,502	21,622	2,315

(a) Not available. (b) Included with "Other".

4. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1946–47 consisted of :—pulse, 7,893 tons, £343,915 ; onions, 7,248 tons, £170,125 ; potatoes, 25,852 tons, £504,658 ; other vegetables, 7,038 tons, £222,017. Imports totalled 4,063 tons, valued at £279,974, of which pulse comprised 3,971 tons, valued at £275,898.

The export trade in dehydrated and preserved vegetables has shown remarkable expansion since 1938–39. In 1946–47 exports of dehydrated vegetables amounted to 13,702,324 lb., valued at £1,162,426 and exports of preserved vegetables consisted of :—Peas, 3,895,478 lb., £145,091 ; tomatoes, 1,700,285 lb., £63,027 ; other vegetables 22,502,942 lb., £738,535.

Exports of both canned and dehydrated vegetables during the war years were mainly for the purpose of supplying the Australian, British and Allied Services overseas.

§ 19. Minor Crops.

1. **General.**—There are many other crops which do not occupy so prominent a position as those already enumerated. Some of the more important of these are included under the headings—Tobacco, Hops, Flax, Peanuts, Cotton and Sorghum.

2. **Grass Seed.**—Particulars of the area of grass crops grown for seed cannot be accurately determined as seed is obtained from certain crops such as clover, lucerne, etc. at a second cutting. The production of seed recorded in 1945–46 was clover, 15,288 cwt. ; lucerne, 7,444 cwt. ; other grass seed, 23,763 cwt., or a total of 46,495 cwt.

3. **Other Grains from Sorghums.**—In addition to the grass seed referred to in paragraph 2 above and grain sorghum in § 9, considerable expansion has occurred in the area sown to Japanese Millet, Panicum and Setaria. Particulars of the area and production for the years 1941–42 to 1945–46 are given in the table below.

SORGHUMS : AREA AND PRODUCTION OF GRAIN, AUSTRALIA.

Year.	Japanese Millet.(a)		Panicum, Millet and Setaria.(b)	
	Area.	Production.	Area.	Production.
	Acres.	Tons.	Acres.	Tons.
1941–42	(c)	(c)	14,042	5,497
1942–43	496	149	9,319	3,115
1943–44	1,083	460	15,948	8,044
1944–45	2,948	964	16,570	4,784
1945–46	2,628	1,526	22,172	8,711

(a) Victoria only. (b) Queensland only. (c) Not available.

4. **Tobacco.**—(i) *General.* Tobacco-growing years ago promised to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888–89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area declined considerably.

(ii) *States, Area and Production.* The expansion of the tobacco-growing industry was hoped for as a war-time measure but, although the acreage planted increased slightly during the first three war years, it has since decreased considerably, being in 1945–46 only 35 per cent. of the annual average for the ten years ended 1938–39 and the production of dried leaf only 47 per cent. of the pre-war average. The area of 3,971 acres and production of 2,505,000 lb. represented a decrease on 1941–42 of 4,849 acres and of more than 4,535,000 lb.

In the following table particulars of the area and production of tobacco are given by States for each of the years 1938–39 and 1942–43 to 1945–46, together with averages for the ten year periods ended 1938–39 and 1945–46 :—

TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
				AREA IN ACRES.				
Average 10 seasons ended 1938–39 ..	1,274	6,237	2,865	292	502	89	1	11,260
1938–39 ..	629	2,559	3,653	39	908	130	1	7,919
1942–43 ..	823	1,850	3,149	..	1,347	..	..	7,169
1943–44 ..	657	2,000	2,948	..	1,011	..	..	6,616
1944–45 ..	410	1,500	1,862	..	1,003	..	..	4,775
1945–46 ..	370	1,408	1,897	..	296	..	..	3,971
Average 10 seasons ended 1945–46 ..	701	2,572	3,351	24	1,104	53	3	7,808
				PRODUCTION OF DRIED LEAF. '000 lb.				
Average 10 seasons ended 1938–39 ..	860	2,393	1,590	83	361	56	..	5,343
1938–39 ..	398	720	2,094	13	767	54	..	4,046
1942–43 ..	772	1,017	1,843	..	1,337	..	..	4,969
1943–44 ..	515	1,544	1,779	..	795	..	..	4,633
1944–45 ..	348	575	1,314	..	607	..	..	2,844
1945–46 ..	365	431	1,411	..	298	..	..	2,505
Average 10 seasons ended 1945–46 ..	574	1,289	2,077	5	805	33	1	4,784

(iii) *Australian Tobacco Board.* The Australian Tobacco Board was constituted in May, 1941 for the purpose of regulating the marketing of Australian-grown tobacco leaf, which must be submitted to the Board for appraisement.

(iv) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into the industry in 1926, 1931 and 1940 and reports were issued.

(v) *Tobacco Inquiry Committee.* The Tobacco Inquiry Committee, which was appointed by the Commonwealth Government to investigate certain aspects of the industry in North Queensland, presented its report in 1933. Recommendations included that for payment of a sum of £20,000 annually for a period of five years to assist the States to continue economic and scientific investigations. This recommendation was adopted and the distribution was spread between the years 1934–1938 as follows:—£5,000 to the Council for Scientific and Industrial Research, £3,750 to each of the States of New South Wales, Victoria and Queensland, and £1,250 each to South Australia, Western Australia and Tasmania.

A further grant of £62,500, which was increased by £11,250 in 1941, was allotted by the Commonwealth Government to be paid periodically between the years 1939 to 1943. The amount of £73,750 was allocated as follows:—Council for Scientific and Industrial Research, £25,000, and £10,000 annually among the States for the years 1939 and 1941 to 1943, and £8,750 for 1940. In August, 1946, the Commonwealth Cabinet approved a grant of £10,000 per annum for five years on a £ for £ basis to be allocated among producing States for experimental and demonstration work in connexion with tobacco leaf production; particularly in regard to control and elimination of diseases and pests. The annual grant of £10,000 has been allocated to States on the following basis:—Queensland, £3,750; New South Wales, £1,500; Victoria, £2,250; Western Australia, £2,500.

The Council for Scientific and Industrial Research is investigating diseases affecting the tobacco plant, including work on disease-resisting varieties, and is making tests of smoking quality. In spite of delays due to the war, the Council has been successful in discovering effective means of preventing blue mould, which has seriously retarded the development of the industry. The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

(vi) *Tobacco Factories.* In 1945–46 the quantity of stemmed leaf used in tobacco factories in Australia amounted to 15.5 million lb. of which 4.7 million was of local origin and the balance was imported, chiefly from the United States of America.

(vii) *Imports.* The total net imports of tobacco into Australia during the years 1945–46 and 1946–47 were valued at £A.5,126,802 and £A.4,376,147 respectively. These figures include net imports of unmanufactured tobacco valued at £A.5,829,636 in 1945–46 and £A.4,082,081 in 1946–47.

5. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1945–46 being 1,359 acres, of which 1,191 acres were in Tasmania, 153 acres in Victoria and a small area of 15 acres in Western Australia. The Tasmanian area, though still small, has increased during the present century, the total for 1901–2 being 599 acres. In Victoria the area, which in 1901–2 was 307 acres, dwindled to 71 acres in 1918-19, then rose to 312 acres in 1925–26 and dropped to 173 in 1939–40. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883–84 being 1,758 acres.

In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1938–39 and 1942–43 to 1945–46 :—

HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production. Quantity.	Production. Gross Value.	Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries
	Cwt.	£	Cwt.	Cwt.	Cwt.	Cwt.
1938–39	21,450	182,550	1,565	2	23,013	20,991
1942–43	24,810	210,480	82	499	24,393	21,549
1943–44	26,348	238,162	1,021	401	26,968	21,710
1944–45	23,160	230,400	177	60	23,277	22,156
1945–46	19,835	225,946	2,402	55	22,182	22,436

(a) Disregarding movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

6. Flax.—For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914–18 War there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government. Bounties were paid on production during the years 1907 to 1918 and again for each of the five years ended 1935. The amounts distributed as bounty during these periods totalled £2,370 and £2,830 respectively. However, the maximum area, which was sown in 1919–20, was only slightly more than 2,000 acres. The area subsequently declined to less than 100 acres in 1928–29. A further attempt to establish the industry was made in 1935 and as a result the area in Victoria had increased to 1,358 acres by 1938–39. Following the outbreak of the 1939–45 War the area sown increased rapidly, reaching over 54,000 acres in 1941–42 and over 61,000 acres in 1944–45. In 1945–46, however, the area shown fell by 32 per cent. to 41,413 acres. Victoria is the chief producing State, but South Australia, Western Australia and Tasmania have also contributed to this war-time expansion which was necessary to ensure Australia's supplies of flax and, in accordance with an agreement negotiated between the two Governments, to provided an export to assist in meeting the urgent needs of the United Kingdom. The arrangement concluded on 31st October, 1946, and action is being taken to effect financial adjustment between the two countries.

Details of the area under flax and the production of straw are given in the following table :—

FLAX : AREA AND PRODUCTION.

Year.	Victoria.	S. Australia.	W. Aust.	Tasmania.	Total
		Area (Acres).			
1938–39..	1,358	..	..	..	1,358
1942–43..	26,173	9,818	8,785	11,064	56,740
1943–44..	31,567	9,511	7,642	6,011	55,631
1944–45..	38,459	10,537	8,278	3,803	61,077
1945–46..	26,419	6,292	5,356	3,346	41,413
		Production. (Tons of Straw.)			
1938–39..	950	..	..	..	950
1942–43..	27,529	8,361	6,150	5,462	47,511
1943–44..	40,037	10,450	6,618	4,456	62,461
1944–45..	17,035	3,315	3,907	4,088	28,345
1945–46..	18,798	6,969	4,229	1,360	31,356

Although the growing of flax on a large scale was established as a war-time measure, it is proposed to continue the industry at a level sufficient to meet local requirements providing that it can be efficiently maintained in competition with other countries. It has been estimated that about 30,000 acres are required to produce flax for the peace-time needs of Australia.

The industry is under the control of the Flax Production Committee appointed under the Supply and Development (Flax Production) Regulations. The Committee has, amongst other things, organized the growing and harvesting of the crop, and the processing of the flax as well as disposing of the resultant products to spinners and others in Australia and overseas. In 1943–44 in the four producing States there were 31 mills under the control of the Committee. Some of these mills have since been closed.

The growing of flax for oil has not been developed extensively in Australia, the area devoted to this purpose in 1945–46 being 383 acres from which 51 tons of linseed were obtained. Action is being taken to develop this industry.

The flax industry was the subject of two investigations, one in 1933 and the other in 1936 (*see* Official Year Book No. 32, p. 658).

7. **Peanuts.**—The production of peanuts, or groundnuts, in Australia is mainly confined to Queensland although small quantities are grown in New South Wales and Western Australia. Details of the area and production are given in the table below.

PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Year.	Area.				Production.			
	N.S.W.	Q'land.	W. Aust.	Total.	N.S.W.	Q'land.	W. Aust.	Total.
	Acres.	Acres.	Acres.	Acres.	Tons.	Tons.	Tons.	Tons.
Average 10 years ended 1938–39	29	8,320	100	8,449	(*d*) 11	3,715	24	3,750
1938–39 ..	3	21,220	145	*a* 22,408	(*b*)	7,690	27	*ac* 7,934
1942–43 ..	4	15,849	25	15,878	4	6,387	10	6,401
1943–44 ..	..	18,415	25	18,440	..	9,614	1	9,615
1944–45 ..	7	18,936	42	18,985	3	10,225	14	10,242
1945–46 ..	17	25,203	13	25,233	7	13,298	4	13,309
Average 10 years ended 1945–46	5	11,450	29	11,484	(*e*) 4	5,714	14	5,730

(*a*) Includes 1,040 acres, 217 tons in Northern Territory. (*b*) Not available. (*c*) Excludes New South Wales. (*d*) Average for five years. (*e*) Average for six years.

The gross value of the 1945–46 crop was £494,488.

In addition to the production shown above, considerable quantities of peanut kernels are imported annually, chiefly from India, for oil expression purposes. Details of Australia's available supplies in terms of kernels are given for the years 1938–39 and 1942–43 to 1946–47.

PEANUTS (IN TERMS OF KERNELS): AVAILABLE SUPPLIES, AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Production(*a*) ..	3,500	4,092	4,268	6,410	6,828	8,878
Imports	2,270	6,567	4,369	11,022	764	
Total ..	5,770	10,659	8,637	17,432	7,592	8,878

(*a*) Crop harvested in April–May of the preceding year and available for consumption during year shown.

8. **Broom Millet.**—The total area devoted to broom millet in 1945–46 was 5,189 acres, of which 3,704 acres were in New South Wales, 1,195 in Victoria, 240 in Queensland and 50 in Western Australia. The total production from these areas was 32,673 bushels of grain and 31,719 cwt. of fibre.

9. **Nurseries.**—In all the States fairly large areas are occupied as nurseries. The acreages under flowers, fruit-trees, etc., in 1945–46 in the various States were as follows:—New South Wales, 603 acres; Victoria 2,246 acres; Queensland, 67 acres; South Australia, 137 acres; Western Australia, 162 acres; and Tasmania, 83 acres; a total for Australia of 3,298 acres.

10. **Cotton.**—(i) *General.* The production of cotton in Australia is restricted to Queensland where cultivation began in 1860, and ten years later the area cropped had increased from 14 acres to over 14,000 acres. The reappearance of American cotton in the European market on the conclusion of the Civil War gave a severe setback to the new industry, and the area declined continuously until 1888, when only 37 acres were planted. Later on the industry was revived, and manufacturing on a small scale was undertaken on two separate occasions at Ipswich, but low prices over a term of years checked development.

(ii) *Bounties, etc.* In 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton and ginned it on owner's account, the final return being equal to about 1¾d. per lb. The rise in price enabled the Government to offer a guarantee of 5½d. per lb. for seeded cotton of good quality for the three years ended 31st July, 1923, and the areas picked increased from 166 areas in 1920 to 50,186 acres in 1924. Guarantees were continued until 1926, when the Commonwealth Government granted a bounty varying from ¾d. to 1½d. per lb. according to grade. In addition, the cotton-manufacturing industry received a graduated bounty on all cotton yarn manufactured in Australia which contained 50 per cent. of home-grown cotton. This bounty, however, ceased to operate after 30th June, 1932. The cotton-growing industry was further assisted by the Bounty Act of 1934, which extended the period to 1940 at varying rates of bounty.

The Raw Cotton Bounty Act 1940 provided an extension of assistance until 31st December, 1946. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947.

The Tariff Board carried out an investigation into the cotton-growing industry in 1945.

(iii) *Expansion of the Cotton-growing Industry.* Australia produces less than its requirements of raw cotton, the balance being obtained chiefly from the United States of America and India. Efforts have been directed towards increasing production by an extension of area and the introduction of irrigation methods, but the results so far have not met with much success. Production was increased during the war years but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV. " Manufacturing Industry ".

The area under cultivation and the production in Queensland for the years 1939 and 1943 to 1946 are shown hereunder :—

COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned-Equivalent in Bales. (*a*)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£	'000 lb.	Bales.	lb.	lb.
Average 10 seasons ended 1939 ..	58,436	16,617	291,106	5,564	11,181	284	95
1939	41,212	17,528	*b* 301,180	6,183	12,447	424	150
1943	41,389	9,540	212,485	3,346	6,814	230	81
1944(*c*) ..	17,424	8,508	186,085	2,946	6,055	488	169
1945	7,698	1,819	41,818	651	1,305	236	85
1946	7,902	3,022	65,552	1,139	2,372	382	144
Average 10 seasons ended 1946 ..	39,385	10,793	207,159	3,784	7,694	274	96

(*a*) Bales of approximately 500 lb. (*b*) Includes governmental assistance. (*c*) Includes 7,221 lb. of unginned cotton and the equivalent of ginned cotton, grown in New South Wales.

(iv) *Consumption of Raw Cotton.* The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938–39.

RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

Year.	Production.	Imports.	Total.	Consumption
	'000 lb.	'000 lb.	'000 lb.	'000 lb.
1938–39	4,774	11,790	16,564	14,117
1939–40	6,183	17,826	24,009	18,332
1940–41	4,128	33,853	37,981	26,540
1941–42	5,631	31,959	37,590	29,766
1942–43	4,925	29,634	34,559	31,713
1943–44	3,346	20,805	24,151	30,955
1944–45	2,946	28,567	31,513	27,758
1945–46	651	26,494	27,145	25,329

11. **Coffee.**—Queensland is the only State in which coffee has been grown to any extent, and the results have not been satisfactory. The area of this crop reached its highest point in the season 1901–2 with 547 acres. Thereafter the acreage fluctuated but on the whole with a downward tendency, and in 1945–46 only 5 acres were recorded with a production of 8,044 lb.

12. **Other Crops.**—Miscellaneous small crops grown in Australia include chicory, cut flowers, herbs, ginger, liquorice and vegetable seeds.

§ 20. Bounties, etc.

1. **Bounties.**—The bounties paid by the Commonwealth Government during the year ended 30th June, 1946 amounted to £76,116. This amount refers only to bounties paid under the Bounties Acts and does not include financial assistance given to wheat-growers and other primary producers under other Acts. Particulars of the assistance so rendered by the Commonwealth Government are furnished hereafter. Details of the amounts paid as bounty during the years 1941–42 to 1945–46 are as follows :—

BOUNTIES : AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
			£	£	£	£	£
Wire Netting Bounty Acts 1939–1944	9s. 7d. per ton ..	23rd Oct., 1947	369	421	447	496	349
Tractor Bounty Act 1939–1944	According to capacity, £32–£72	23rd Oct., 1947	1,108	850	5,652	13,317	10,095
Wine Export Bounty Act 1939–1944	1s. per gallon from 1st March, 1940	28th Feb., 1947.	38,610	15,049	22,506	34,613	53,649
Raw Cotton Bounty Act 1940–1946	(b)	31st Dec., 1951	38,439	(a) 93,136	..	..	(b) 11,887
Superphosphate Bounty Act 1941	25s. per ton ..	31st Dec., 1945	779,816	77,442	..	..	..
Cable and Wire Bounty Act 1941—							
Rubber insulated cable and wire	4d. per lb. of copper wire used	30th June, 1942.	8,892	3,502	..	..	..
Papua and New Guinea Bounties Act—							
Cocoa Beans ..	1½d. per lb. ..	31st Dec., 1947.	4,862	13	..	..	136
Bamboos and Rattans (Unmanufactured)	£4 per ton ..	" "	9	..	..	..	..
Manila, Sisal and Other Hemp Fibres	£6 " ..	" "	..	..	..	..	..
Coir Fibre ..	£3 " ..	" "	..	..	..	..	..
Kapok	2d. per lb. ..	" "	17	..	..	..	..
Total	.. .. ..	..	872,122	190,413	28,605	48,426	76,116

(a) Year ended December, 1942. (b) Rates subject to variation as prescribed.

2. **Other Financial Assistance to Primary Producers.**—(i) *General.* In addition to the payment of bounties mentioned in the preceding paragraph, financial assistance has been granted by the Commonwealth Government for the relief of wheat-growers, fruit-growers, and other primary producers. The amounts shown exclude such items as the expenditure on cattle tick control, banana industry, tobacco investigation and apple and pear research, which indirectly benefits the industries concerned, and exclude loans made to States to alleviate hardship suffered by primary producers in consequence of drought. The distribution as bounty, relief or subsidy has been made in the following manner.

Details of payments made prior to 1938–39 are given on page 847 of Official Year Book No. 36.

AMOUNTS PAID BY THE COMMONWEALTH GOVERNMENT AS ASSISTANCE FOR RELIEF OF PRIMARY PRODUCERS.

Amounts paid to—	Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
		£	£	£	£	£	£	£	£
Wheat-growers as—									
Assistance ..	1938–39	558,489	307,564	70,824	398,559	421,206	(a)51,961	..	1,808,693
,, ..	1939–40	910,839	415,119	109,805	436,667	497,888	a114,716	1,033	2,486,067
,, ..	1940–41	477,819	246,328	47,878	413,661	263,615	(a)49,292	..	1,498,593
Relief (Drought)	,,	320,000	250,000	..	200,000	200,000	..	..	970,000
Assistance ..	1941–42	521,513	392,335	29,789	359,614	294,332	(a)54,133	..	1,651,716
Relief (Drought)	,,	..	..	15,000	..	..	623	..	15,623
Assistance ..	1942–43	447,593	424,584	40,009	470,817	(c)804,953	(a)55,587	..	2,243,543
,, ..	1943–44	1,467,345	710,434	159,989	806,042	c1,098,812	(a)47,207	..	4,289,829
,, ..	1944–45	644,034	164,420	231,717	378,621	c1,113,386	(a)50,561	..	2,582,739
Relief (Drought)	,,	475,000	725,000	..	330,000	40,000	..	..	1,570,000
Assistance ..	1945–46	1,132,251	602,938	183,518	448,553	(c)639,228	(a)68,914	..	3,075,402
Relief (Drought)	,,	Cr 1,146	70,000	..	101,110	..	..	..	169,964
Assistance ..	1946–47	334,996	560,244	47,108	417,590	(c)340,968	(a)50,026	..	1,750,932
Relief (Drought)	,,	315,092	150,000	..	66,847	..	..	..	531,939
Total 1931–32 to 1946–47	..	11,823,287	8,204,556	1,260,745	8,337,770	8,767,971	686,545	2,954	39,083,831
Fruit-growers— Total 1933–34 and 1934–35(b)	..	20,763	58,620	2,581	18,374	25,631	134,031	..	260,000
Primary Producers (other than wheat-growers)— Artificial Fertilizer subsidy	1938–39	18,290	76,500	19,020	36,400	43,260	12,460	90	206,020
,, ,,	1939–40	427	17,100	4,320	783	320	250	..	23,200
,, ,,	1941–42	118,939	255,754	21,600	166,210	197,211	20,103	..	779,817
,, ,,	1942–43	92,138	174,195	18,924	108,248	131,811	28,594	..	553,910
,, ,,	1943–44	163,813	405,600	20,690	255,290	374,122	83,637	..	1,303,152
,, ,,	1944–45	303,506	697,955	41,435	456,968	569,003	145,521	..	2,214,388
,, ,,	1945–46	398,953	935,304	70,661	690,907	1,028,642	152,910	..	3,286,443
,, ,,	1946–47	431,702	952,257	108,271	646,540	880,191	155,086	..	f3,174,047
Total 1932–33 to 1946–47	..	1,696,988	4,131,160	443,334	2,658,097	3,544,540	684,460	370	13,158,958
Dairying Industry	1942–43	277,079	430,100	365,532	49,529	42,275	21,791	..	1,186,306
,, ,,	1943–44	1,832,317	2,614,289	2,145,747	338,267	285,268	130,232	..	7,346,120
,, ,,	1944–45	1,495,196	2,716,807	1,878,759	314,606	260,287	146,542	..	d6,812,197
,, ,,	1945–46	1,523,680	2,383,696	1,745,454	322,593	273,763	144,415	..	6,373,511
,, ,,	1946–47	1,069,987	2,353,084	1,111,111	322,150	238,453	128,684	..	e5,223,469
Relief (Drought)	,,	143,800	23,803	24,999	4,322	333	..	..	197,257
Total ..	..	6,342,059	10,521,779	7,271,603	1,351,376	1,100,379	551,664	..	27,138,860
Grand Total 1931–32 to 1946–47 ..	..	19,883,097	22,916,115	8,978,266	12365617	13,438,530	2,056,700	3,324	79,641,649

(a) Includes special grant to Tasmania. (b) Growers of apples, pears and mandarins. (c) Includes Wheat Acreage Restriction Grant. (d) Includes payment of £1,659,325 recovered in London. (e) Includes £3,484,729 recovered from the United Kingdom Government. (f) Includes subsidy payments of £186,649 on nitrogenous fertilizers.

(ii) *Wheat-growers.* Details of payments made prior to 1938–39 will be found in Official Year Book No. 36. In 1938–39 a sum of £1,808,693, collected through the medium of a flour tax, was allocated for distribution as relief to wheat-growers. From the same source a sum of £1,708,543 was allocated to the States for the same purpose during 1942–43, £1,940,481 in 1943–44, £1,995,775 in 1944–45, £1,779,238, in 1945–46 and £1,747,383 in 1946–47.

In addition to the foregoing amounts paid from flour tax, compensation was paid to wheat-growers in Western Australia where acreage restrictions have applied since 1942–43. The amounts so paid during each year 1942–43 to 1946–47 were £535,000, £599,348, £586,964, £243,828 and £2,619.

(iii) *Artificial Fertilizers Subsidy.* Assistance has been given to primary producers other than wheat-growers in the form of a subsidy on artificial fertilizers ; the rate was 15s. for each ton of artificial manure used in the production of primary produce, but in 1936–37 this was reduced to 10s. per ton. The payment of this subsidy ceased on 30th June, 1939, but was resumed one year later.

Because of the substantial increases in the price of superphosphate and their effect on the efficiency of the farming industry, the Commonwealth Government introduced a bounty on superphosphate produced and sold in Australia after 1st July, 1941. The rate of bounty was fixed at 25s. per ton, payable to manufacturers, who were required to adjust their prices so that consumers received the full benefit of the subsidy. For 1942–43 and subsequent years subsidy has been paid under the Primary Producers Relief (Superphosphate) Act 1943, the rates of subsidy being determined in accordance with variations in costs from 1943 basic costs. For 1946–47 the actual rate of subsidy was £2 11s. 11d. Details of the amounts paid are given in the table above.

(iv) *Dairy Industry.* The war-time demand for butter, cheese and processed milk products was such as to necessitate production being increased to the limit of existing resources. With this object in view the Commonwealth has subsidized production and so encouraged dairy farmers to maintain output at the highest level possible. The amounts paid since the introduction of the subsidy are shown above. These do not include the subsidies paid on the production of whole milk which is consumed directly and which amounted to £319,000 in 1943–44, £1,786,000 in 1944–45, £2,520,000 in 1945–46 and £2,249,000 in 1946–47.

(v) *Farmers' Debt Adjustment.* In addition to the assistance outlined above the Loan (Farmers' Debt Adjustment) Act 1935 made provision for grants, totalling £12 million, to be made available to the States for the adjustment of farmers' debts. Of this amount £10 million was allocated as follows :—New South Wales, £3,450,000 ; Victoria, £2,500,000 ; Queensland, £1,150,000 ; South Australia, £1,300,000 ; Western Australia, £1,300,000 ; and Tasmania, £300,000. The remaining £2 million was allocated in the same proportion, and was subject to review at a later date.

§ 21. Fertilizers.

1. **General.**—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive.

2. **Fertilizers Acts.**—In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

3. **Imports.**—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphates and is sufficient for local requirements.

The chief source of Australia's normal supplies of rock phosphate was Nauru and the Gilbert Islands group. The war in the Pacific interrupted supplies from these sources and the bulk of the imports since 1941–42 came from Algeria, Egypt and the Makatea Islands. Sodium nitrate is obtained chiefly from Chile.

The imports of manures during 1938–39 and the four years ended 1946–47 are shown in the following table :—

FERTILIZERS : IMPORTS INTO AUSTRALIA.

Australian Currency Values.

Fertilizer.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Ammonium sulphate	cwt.	710,065	27	113,459	647,110	551,730
	£	336,872	217	108,638	504,102	504,140
Potash salts ..	cwt.	223,202	66,590	90,547	145,049	126,941
	£	102,794	67,164	96,818	171,329	161,531
Rock phosphate ..	cwt.	16,008,437	6,042,101	9,468,506	13,285,672	14,466,308
	£	1,038,399	605,254	1,333,960	2,085,712	2,299,128
Sodium nitrate ..	cwt.	203,666	735,954	327,426	..	66,759
	£	103,074	431,050	186,497	..	51,103
Other	cwt.	125,551	5,526	4,942	106,938	85,364
	£	12,237	10,273	9,190	20,872	23,347
Total ..	cwt.	17,270,921	6,850,198	10,004,880	14,184,769	15,297,102
	£	1,593,376	1,113,958	1,735,103	2,782,015	3,039,249

4. **Exports.**—The following table shows the exports of fertilizers (practically all of which are manufactured locally) during the same periods :—

FERTILIZERS : EXPORTS FROM AUSTRALIA.

Fertilizer.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
Ammonium sulphate	cwt.	2,097	423	4,636	3,484	2,471
	£	940	397	4,469	6,125	1,996
Bone-dust ..	cwt.	5,238	..	..	9	..
	£	2,931	..	..	7	.
Rock phosphate ..	cwt.	61	375	27	..	
	£	143	804	65	..	..
Sodium nitrate ..	cwt.	22	100	84	11,243	104
	£	42	141	85	12,927	374
Superphosphate ..	cwt.	37,062	975	990	951	4,946
	£	6,182	565	634	570	2,061
Other	cwt.	53,197	10,008	4,582	3,198	10,674
	£	27,323	13,566	6,581	6,389	7,076
Total ..	cwt.	97,677	11,881	10,319	18,885	18,195
	£	37,561	15,473	11,834	26,018	11,507

5. **Quantities Locally Used.**—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the year 1945–46 is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

AREA FERTILIZED AND QUANTITY OF FERTILIZERS USED, 1945–46.

State or Territory.	Area Fertilized.			Fertilizers Used.		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
	Acres.	Acres.	Acres.	Tons.	Tons.	Tons.
New South Wales	2,913,654	462,959	3,376,613	87,163	19,044	106,207
Victoria	3,383,072	2,708,379	6,091,451	114,541	133,484	248,025
Queensland..	254,667	2,277	256,944	46,623	210	46,833
South Australia	3,035,536	853,699	3,889,235	109,548	37,599	147,147
Western Australia	2,821,864	1,537,658	4,359,522	123,818	66,820	190,638
Tasmania	223,505	218,024	441,529	24,894	9,326	34,220
Australian Capital Territory ..	4,693	2,801	7,494	193	125	318
Total	12,636,991	5,785,797	18,422,788	506,780	266,608	773,388

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the years 1938–39 and 1942–43 to 1945–46 are included in the next table. These details include the quantity used in the top-dressing of pasture lands.

The serious diminution in the output of superphosphate during the war caused by the interruption of imports of rock phosphate necessitated the introduction of a system of rationing of supplies which adversely affected the yields from those crops which are dependent upon the use of superphosphate and other fertilizers.

QUANTITY OF ARTIFICIAL FERTILIZERS USED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Total
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39 ..	186,569	395,163	61,300	235,443	280,384	33,933	..	432	1,193,224
1942–43 ..	95,060	184,795	24,749	135,116	162,776	24,618	..	379	627,493
1943–44 ..	82,200	163,690	33,677	86,456	114,572	25,306	..	290	506,101
1944–45 ..	79,432	186,458	41,162	102,979	137,211	36,199	..	235	583,667
1945–46 ..	106,207	248,025	46,833	147,147	190,638	34,220	..	318	773,388

As mentioned in § 20 the Commonwealth Government has encouraged the use of artificial fertilizers by subsidizing primary producers, other than wheat-growers, at the rate of 15s. per ton up to 1936–37 when the subsidy was reduced to 10s. per ton. The payment of this subsidy ceased on 30th June, 1939, but was re-introduced as from 1st July, 1941 at the rate of 25s. per ton. For the purpose of stabilizing the price of superphosphate the Primary Producers Relief (Superphosphate) Act 1943 was passed and subsidy payments have been made under this Act since 1942–43.

6. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1945–46 was 38, made up as follows :—New South Wales 6 ; Victoria, 8 ; Queensland, 6 ; South Australia, 7 ; Western Australia, 6 ; and Tasmania, 5. The production of superphosphate in Australia during 1945–46 amounted to 1,105,304 tons, the largest producing States being Victoria, Western Australia and South Australia

§ 22. Ensilage.

1. **Government Assistance in Production.**—The various State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.

2. **Quantity Made.**—Information regarding the number of holdings on which ensilage was made and the quantity made during each of the seasons 1938–39 and 1942–43 to 1945–46 is given in the following table :—

ENSILAGE MADE.

State.	1938–39.		1942–43.		1943–44.		1944–45.		1945–46.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	No.	Tons.	No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales	1,476	124,496	(b)	71,801	(b)	58,143	(b)	39,830	1,110	73,598
Victoria	549	28,716	(b)	32,099	(b)	27,108	454	19,993	(b)	31,576
Queensland	291	17,772	(b)	20,825	(b)	13,021	(b)	11,519	258	12,775
South Australia ..	103	6,056	(b)	9,847	(b)	5,315	(b)	2,749	(b)	4,664
Western Australia ..	328	16,156	(b)	15,019	(b)	9,828	(b)	19,328	(b)	13,888
Tasmania	12	490	(b)	967	(b)	866	(b)	1,325	(b)	2,567
Australian Capital Territory	..	..	(b)	473	(b)	496	(b)	..	(b)	1,465
Australia ..	2,759	193,686	(b)	151,031	(b)	114,777	(b)	94,744	(b)	140,533

(a) Number of holdings on which ensilage was made. (b) Not available.

The drought of 1902–3 drew increased attention to the value of stocks of ensilage and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939–40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output has declined noticeably. The production in 1945–46 was 140,533 tons, 162,962 tons less than the 1939–40 record production.

3. **Stocks Held on Farms.**—Details of farm stocks of ensilage, which were collected for the first time as at 31st March, 1943, are shown in the following table :—

ENSILAGE : FARM STOCKS.

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1943 ..	127,434	32,097	23,264	7,723	11,063	1,646	415	203,642
1944 ..	100,859	24,319	18,676	4,944	6,634	882	890	157,204
1945 ..	54,268	15,226	14,688	2,151	5,591	899	155	92,978
1946 ..	73,371	27,675	16,926	3,186	3,832	3,925	1,740	130,655

§ 23. Agricultural Colleges and Experimental Farms.

In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that is it practicable to produce certain crops in a given place, but to show also how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder; in cheese and butter making; in the management, breeding and preparation for the market of live stock; in the eradication of pests and weeds; and in carpentering, blacksmithing and other trades.

Expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

§ 24. Employment in Agriculture.

Particulars relating to the number of males employed in agriculture are available up to 1941–42 in Official Year Book No. 36, page 852, and also in previous issues. Similar details for later years are not available, but statistics of permanent employment on rural holdings may be found in § 25 following.

§ 25. Number and Area of Rural Holdings and Permanent Employment Thereon.

1. **General.**—The statistical data included in the chapters relating to agricultural, pastoral and dairying activities are obtained at an annual census taken in each State under the direction of the State Statisticians. This census is taken as early as practicable after the conclusion of the main harvest and covers every holding within the boundaries of each State.

A holding in Australia has been defined by the States on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate any comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of live stock or the products of live stock.

With the exception of Queensland, particulars of the number of holdings included in these censuses are available for all States over a series of years. It was not until 1938–39, however, that a complete tabulation became available for Queensland.

2. **Number and Area.**—The following table shows the number and area of the holdings in each State for the years 1938–39 and 1941–42 to 1945–46.

RURAL HOLDINGS: NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Total.
NUMBER OF RURAL HOLDINGS.								
1938–39 ..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1941–42 ..	73,973	72,027	*a*42,500	30,565	20,395	11,500	208	251,168
1942–43 ..	73,579	71,489	42,748	27,934	18,351	11,532	209	245,842
1943–44 ..	73,074	70,961	42,457	27,826	18,345	11,438	202	244,303
1944–45 ..	74,566	70,856	42,615	27,867	18,737	12,173	201	247,015
1945–46 ..	74,173	70,652	42,511	27,635	18,400	11,991	221	245,583
TOTAL AREA OF RURAL HOLDINGS.								
	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.
1938–39 ..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1941–42 ..	173,554	41,292	350,000*a*	145,634	212,198	6,791	397	929,866
1942–43 ..	171,054	41,035	348,866	145,443	208,886	6,525	386	922,195
1943–44 ..	171,878	41,275	348,830	144,526	204,030	6,393	363	917,295
1944–45 ..	170,080	40,830	348,648	137,386	207,987	6,664	382	911,977
1945–46 ..	169,380	40,523	354,944	142,505	206,001	6,479	376	920,208

(*a*) Estimated.

3. **Analysis of Holdings.**—(i) *General.* It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying, or any of these in combination.

(ii) *New South Wales.* Such an analysis is made in New South Wales but, as pointed out by the Statistician, it should be regarded as an approximation. It is compiled from the description of purpose given by the occupier of the holding at the time of the Census. This tabulation reveals that there were 71,743 holdings so classified in New South Wales during 1940–41. Of this number 9,938 described their main purposes as agricultural only, 20,897 as pastoral only, 14,098 dairying only, 2,558 as poultry, pig or bee farming while the main purpose of the remaining 24,252 holdings was stated to be a combination of two or more of these activities. Holdings used mainly for residential or other purposes but which were used partly for the production of rural products have been omitted. These numbered 2,752 during 1940–41.

4. Permanent Employment on Rural Holdings.—The following table shows for each State of Australia the number of persons permanently engaged full-time on rural holdings as at 31st March, 1947.

RURAL HOLDINGS: PERMANENT FULL-TIME EMPLOYMENT AS AT 31st MARCH, 1947.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
				MALES.				
Owners, Lessees or Sharefarmers	74,384	66,033	41,812	26,849	18,548	12,993	134	240,753
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary ..	9,168	9,440	6,917	2,898	2,397	1,393	20	32,233
Employees, including Managers and Relatives working for wages or salary	25,772	17,060	20,170	8,381	8,579	4,232	106	84,300
Total	109,324	92,533	68,899	38,128	29,524	18,618	260	357,286
				FEMALES.				
Owners, Lessees, etc. } Relatives of Owner, Lessee etc. .. .. }	9,516	7,483	12,469	4,309	5,479	1,527	39	40,822
Employees, including Managers and Relatives working for wages or salary	1,871	1,301	2,987	665	949	239	10	8,022
Total	11,387	8,784	15,456	4,974	6,428	1,766	49	48,844
				TOTAL PERSONS ENGAGED.				
Owners, Lessees, etc. } Relatives of Owner, Lessee, etc. .. }	93,068	82,956	61,198	34,056	26,424	15,913	193	313,808
Employees, including Managers and Relatives working for wages or salary	27,643	18,361	23,157	9,046	9,528	4,471	116	92,322
Total	120,711	101,317	84,355	43,102	35,952	20,384	309	406,130

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the five years 1943 to 1947 for which this information was collected.

RURAL HOLDINGS: PERMANENT FULL-TIME EMPLOYMENT, AUSTRALIA.

Particulars.	As at 31st March—				
	1943.	1944.	1945.	1946.	1947.
Owners, Lessees or Sharefarmers	205,906	220,013	227,796	233,593	240,753
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary	33,552	34,980	37,760	34,241	32,233
Employees, including managers and relatives working for wages or salary	75,698	75,040	73,816	82,582	84,300
Total, Males	315,156	330,033	339,372	350,416	357,286
„ Females (*a*) ..	68,000	60,142	58,979	54,513	48,844
Total Persons engaged ..	383,156	390,175	398,351	404,929	406,130

(*a*) Total permanently engaged, full-time.

CHAPTER XXI.

FARMYARD, DAIRY AND BEE PRODUCTS.

§ 1. Introductory.

1. **General.**—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains have resulted in an increased and improved milk supply. In Australia dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and in certain districts rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. **Mixed Farming.**—Dairying is not, as formerly, wholly confined to agriculturists, since many graziers in a large way of business also give it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established. The extent to which dairy cows and pigs were run in conjunction with the growing of wheat in 1935–36 is referred to on page 375 of Official Year Book No. 33.

3. **Employment.**—The numbers of persons employed in primary industry are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. Details of the numbers so engaged are given in Chapter XX.—Agricultural Production, § 25.

For the years prior to 1940–41, it was possible to classify each holding according to the chief purpose for which it was used and thus obtain a distribution of employment in the three main classes, viz., Agriculture, Pastoral and Dairying. As this information has been omitted from the schedules since that year, it has not been possible to continue the details shown in the following table.

EMPLOYMENT IN DAIRYING INDUSTRY.

Year and Sex.		N.S.W.	Victoria.	Q'land. (*a*)	S. Aust.	W. Aust.	Tas.	Total.
		No.	No.	No.	No.	No.	No.	No.
1935–36 ..	Males ..	38,150	42,072	27,000	4,500	5,465	3,539	120,726
	Females ..	6,481	7,790	7,000	2,756	1,249	2,462	27,738
1936–37 ..	Males ..	37,450	41,922	28,600	4,578	5,261	3,332	121,143
	Females ..	5,444	7,666	7,000	2,331	1,143	2,234	25,818
1937–38 ..	Males ..	35,940	41,878	(*b*) 29,000	4,540	5,495	3,634	120,487
	Females ..	6,027	7,406	(*b*) 7,000	2,779	1,129	2,146	26,487
1938–39 ..	Males ..	35,860	41,829	27,000	4,436	6,365	3,917	119,407
	Females ..	6,505	7,222	7,000	2,812	1,661	2,200	27,400
1939–40 ..	Males ..	35,915	41,854	28,800	4,757	6,362	3,670	121,358
	Females ..	7,130	7,314	7,000	2,418	1,678	2,064	27,604

(*a*) Estimated from returns of Queensland State Government Insurance Office. (*b*) As recorded y Government Statistician.

4. **Growth of the Dairying Industry.**—The following table gives some indication of the activity in the dairying industry since 1918–19 :—

DAIRYING INDUSTRY : AUSTRALIA.

Year.	Number of Dairy Cows.		Production of Butter.	Production of Cheese.	Milking Machines (No. of Stands).	Number of Males engaged.
	In Milk.	Dry.				
			Tons.	Tons.		
1918–19 ..	1,319,588	582,448	81,162	10,621	(*a*)	68,100
1928–29 ..	1,744,728	600,342	129,817	13,490	(*a*)	82,300
1938–39 ..	2,600,707	608,812	203,500	29,304	(*a*)	119,400
1942–43 ..	2,370,982	836,774	171,237	36,134	89,796	(*a*)
1943–44 ..	2,292,769	900,063	156,282	35,825	100,878	(*a*)
1944–45 ..	2,277,718	861,673	141,963	34,620	109,561	(*a*)
1945–46 ..	2,253,566	770,910	150,363	41,238	116,806	(*a*)

(*a*) Not available.

5. **Official Supervision of Dairying Industry.**—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *materiel*, prevails.

The export trade is regulated by the terms of the Commonwealth Commerce (Trade Descriptions) Act 1905–1933, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

§ 2. Dairy Cattle and Dairy Products.

1. **Dairy Herds.**—Due to the lack of uniformity in the schedules used by the several States in the collection of live-stock statistics, it is not possible to measure with precision the growth of the dairy herds of Australia prior to 1943. However, statistics of dairy cows, which provide a reliable measurement of this development, show that in 1918–19 there were 1,900,000 dairy cows in milk and dry, compared with 2,345,000 in 1928–29 and 3,200,000 in 1938–39. This latter figure was sustained until March, 1944, but has since declined, the number recorded at 31st March, 1947, being slightly in excess of 3,000,000. In New South Wales, Victoria, South Australia and Tasmania the proportion of dairy cattle to all cattle is high. In Queensland, the Northern Territory and Western Australia there is a greatly preponderating number of other cattle, the main object in these areas being the production of beef. Dairying, however, has developed greatly in southern Queensland since 1914–15, and the largest contribution to the Australian increase in dairy production has been made by this State. The numbers of dairy cows for 1944 to 1947 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for 1939 cover the same categories, but the period differs in some States (*see* footnote (*a*)). To this extent the figures lack comparability.

NUMBER OF CATTLE AND DAIRY COWS (IN MILK AND DRY).

State.		1939.(a)	31st March—			
			1944.	1945.	1946.	1947.
New South Wales(b)	All Cattle	2,811,884	3,143,378	3,144,701	3,116,834	2,983,093
	Dairy Cows	985,251	919,135	903,157	865,782	849,707
Victoria	All Cattle	1,697,295	2,013,033	1,903,110	1,827,087	2,060,061
	Dairy Cows	859,811	874,796	859,200	811,399	877,205
Queensland	All Cattle	6,097,089	6,524,553	6,623,112	6,542,210	5,945,285
	Dairy Cows	907,123	1,022,859	1,001,378	987,835	913,656
South Australia	All Cattle	318,897	411,997	391,323	374,096	423,980
	Dairy Cows	152,699	161,676	161,953	150,101	163,992
Western Australia	All Cattle	767,680	870,939	852,563	833,567	811,049
	Dairy Cows	119,814	138,100	137,004	133,945	131,711
Tasmania	All Cattle	262,407	230,127	224,668	216,306	220,119
	Dairy Cows	93,816	75,014	75,435	73,943	75,118
Northern Territory	All Cattle	899,472	978,569	984,370	960,039	972,990
	Dairy Cows	(c)	(c)	(c)	(c)	(c)
Australian Capital Territory	All Cattle	7,057	8,083	9,320	7,867	9,109
	Dairy Cows	1,005	1,252	1,264	1,471	1,752
Australia	All Cattle	12,861,781	14,183,679	14,133,167	13,878,006	13,426,646
	Dairy Cows	3,209,519	3,192,832	3,139,391	3,024,476	3,013,141

(a) As at 31st March for New South Wales; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) Includes other milking cows not in registered dairies. (c) Not available.

In the next table the dairy cattle in each State are shown in various categories as at 31st March, 1945, 1946 and 1947. Information in this detail was not collected uniformly in all States prior to 1943.

NUMBER OF DAIRY CATTLE.

State.	31st March.	Dairy Cows.		Dairy Heifers 1 year and over.	Dairy Calves under 1 year.	Dairy Bulls.	Total Dairy Cattle.
		In Milk.	Dry.				
New South Wales	1945	(a)706,272	196,885	212,834	189,777	25,767	1,331,535
	1946	(a)673,699	192,083	234,195	151,946	25,281	1,277,204
	1947	(a)679,672	170,035	205,489	148,037	24,404	1,227,637
Victoria	1945	591,437	267,763	267,265	202,258	35,479	1,364,202
	1946	629,046	182,353	272,102	181,170	35,098	1,299,769
	1947	646,823	230,382	253,131	245,783	35,509	1,411,628
Queensland	1945	742,387	258,991	266,451	210,960	30,453	1,509,242
	1946	714,800	273,035	254,236	171,318	29,312	1,442,701
	1947	653,940	259,716	232,086	158,203	28,177	1,332,122
South Australia	1945	108,428	53,525	41,907	34,099	7,149	245,108
	1946	112,003	38,098	42,457	31,648	7,095	231,301
	1947	119,138	44,854	42,593	47,364	8,118	262,067
Western Australia	1945	66,690	70,314	42,806	48,962	6,157	234,929
	1946	62,951	70,994	40,566	48,966	6,034	229,511
	1947	66,011	65,700	40,766	45,206	5,869	223,552
Tasmania	1945	61,617	13,818	20,892	28,097	3,642	128,066
	1946	60,032	13,911	20,683	28,079	3,462	126,167
	1947	60,165	14,953	22,712	30,905	3,530	132,265
Australian Capital Territory	1945	887	377	637	484	27	2,412
	1946	1,035	436	630	485	38	2,624
	1947	1,273	479	854	298	38	2,942
Australia(b)	1945	2,277,718	861,673	852,792	714,637	108,674	4,815,494
	1946	2,253,566	770,910	864,869	613,612	106,320	4,609,277
	1947	2,227,022	786,119	797,631	675,796	105,645	4,592,213

(a) Includes other milking cows not in registered dairies. (b) Excludes Northern Territory.

2. **Factory System.**—(i) *General.* Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, etc., may be profitably worked at the larger establishments. The product is also of a more uniform quality, and few farmers prefer to convert the cream rather than send it to the factory. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires less than 2¼ gallons.

(ii) *Number of Factories.* The factories in Australia for the manufacture of butter cheese and condensed milk numbered 462 in 1945-46. They were distributed among the States as follows :—New South Wales, 117 ; Victoria, 148 ; Queensland, 100 , South Australia, 46 ; Western Australia, 17 ; and Tasmania, 34. Fuller details regarding numbers of factories, output, etc., are given in Chapter XXIV.—" Manufacturing Industry ".

3. **Butter and Cheese—Stabilization Schemes.**—(i) *Voluntary Plan.* During the period from January, 1926 to April, 1934, a voluntary scheme known as the " Paterson Plan " was in operation and had the effect of stabilizing the price of butter in Australia. The scheme provided for the payment of a levy on all butter produced in Australia sufficient to pay a bounty on export which ranged from 3d. to 4½d. per lb. The local price was raised by the amount of the bounty per unit while the return to the producer on all butter produced was increased by approximately the difference between the rate of bounty paid and the rate of levy charged. The scheme, which continued until 25th April, 1934, did not receive the full support of all butter manufacturers.

(ii) *Compulsory Plan.* On 1st May, 1934 the " Paterson Plan " was superseded by a compulsory price equalization plan. The object of this scheme was to maintain local prices for butter and cheese independently of prices realized for exports. The Dairy Produce Act was passed by the Commonwealth Parliament towards the end of 1933, and at the same time complementary legislation was passed by the Parliaments of New South Wales, Victoria, Queensland and Tasmania. As a result of a referendum among producers held in 1936, Tasmania withdrew from the plan and the State Act expired. In the Commonwealth Act power was given to regulate interstate trade while the State Acts were designed to regulate trade within the respective States. The authority set up by each State Act fixed the proportion of the State's production to be sold within the State, and the Commonwealth Act protected this allocation by regulating the movement of butter and cheese from one State to another and so ensured the removal from the Australian market of the surplus production.

The compulsory plan was invalidated by the decision in 1936 of the Privy Council which declared in the James (Dried Fruits) Case that the Commonwealth had no power under the Constitution to regulate trade between the States.

(iii) *Equalization Scheme.* Since the Privy Council decision, the butter price stabilization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalisation Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalisation Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland, Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946 and Western Australia extended its participation to include cheese in January, 1947.

The Commonwealth Prices Commissioner has fixed the home consumption prices of butter and cheese.

4. **Commonwealth Subsidies.**—(i) *Butter, Cheese and Processed Milk Products.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter, cheese and processed milk products. Subsidies

were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed through factories to milk producers by payments on butter, cheese and processed milk products manufactured.

In the following table, particulars of the average equalization rates and subsidy rates in operation in each year 1942-43 to 1946-47, together with the equalization rates for the pre-war year 1938-39 are shown in respect of butter and cheese. The equalization rates are those determined by the Commonwealth Dairy Produce Equalisation Committee Limited, referred to in the preceding section.

BUTTER AND CHEESE: AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.

(Rates per cwt.)

Year ended 31st March.	Butter.						Cheese.					
	Average Equalization Rate.		Subsidy Rate.		Total.		Average Equalization Rate.		Subsidy Rate.		Total.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1939(*a*) ..	136	3.5	..		136	3.5	71	8	..		71	8
1943(*b*) ..	150	9.1	8	1	158	10.1	91	9.6	4	10	96	7.6
1944 ..	153	1.6	35	5.6	188	7.2	94	5.3	16	6.2	110	11.5
1945 ..	152	10.9	43	8.1	196	7	94	5.75	21	8.5	116	2.25
1946. ..	169	3.3	29	8	198	11.3	99	9.8	17	7	117	4.8
1947 ..	179	8.8	25	4.2	205	1	108	7.8	11	6.95	120	2.75

(*a*) Year ended June. (*b*) Nine months ended March.

Subsidy payments for the year ended 31st March, 1947 were based on the recognized cost to milk producers of 1s. 7½d. per lb. commercial butter equivalent at the factory, but subsidy rates were later increased as a result of increased prices under the United Kingdom Dairy Produce Contract which operated from 1st July, 1946. Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, are to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters.

Following consideration of the initial recommendations submitted by the Joint Dairy Industry Advisory Committee in October, 1947, the Commonwealth Government announced that subsidy payments in respect of milk supplied for butter, cheese and processed milk products manufacture would be made from 1st April, 1947 on the basis of a return to the milk producer of 2s. per lb. commercial butter equivalent. This increase will be absorbed partly by increased prices under the United Kingdom Dairy Products Contract operating from 1st July, 1947, partly by higher home consumption prices for dairy products from 1st December, 1947 and partly by increased Commonwealth subsidy.

Details of the amounts distributed under the Dairy Industry Assistance Acts are shown in the following table. These amounts include assistance on exported dairy products paid in the first instance by the Commonwealth Government and recovered from the Government of the United Kingdom.

COMMONWEALTH SUBSIDIES TO THE DAIRYING INDUSTRY UNDER DAIRYING INDUSTRY ASSISTANCE ACTS.

(£'000.)

Year ended June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.(*a*)
1943	277	430	365	50	42	22	1,186
1944	1,833	2,614	2,146	338	285	130	7,346
1945	1,495	2,717	1,879	315	260	146	6,812
1946	1,524	2,384	1,745	323	274	124	6,374
1947	1,070	2,353	1,111	322	238	129	5,223

(*a*) These amounts include assistance on export dairy products paid in the first instance by the Commonwealth Government and recovered from the Government of the United Kingdom. The actual amount recovered to date amounts to £5,114,021

(ii) *Whole Milk.* In addition to the subsidies referred to above, the Commonwealth Government also subsidizes the production of whole milk consumed directly. The subsidy rates vary according to States, regions within the State and the seasonal period. Details of the amounts distributed are shown in the following table :—

COMMONWEALTH SUBSIDY ON WHOLE MILK FOR DIRECT HUMAN CONSUMPTION.

(£'000.)

Year ended June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1944	35	180	94	..	..	10	319
1945	734	510	210	212	85	25	(a)1,786
1946	1,042	763	295	233	122	55	(a)2,520
1947	901	663	308	187	151	32	(b)2,249

(a) Includes Australian Capital Territory, £10,000. (b) Includes Australian Capital Territory, £7,000.

5. **Total Dairy Production.**—The dairy production for each State in 1945–46 is shown below:—

DAIRY PRODUCTION, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Total.
MILK ('000 gal.)								
Used for—								
Butter ..	(a)167,892	(b)240,910	(c)207,393	36,373	27,205	22,016	30	701,819
Cheese ..	5,233	32,972	26,123	20,884	1,607	2,736	..	89,555
Condensing and concentrating	17,130	45,166	..	(d)	(d)	(d)	..	(e) 65,313
Other purposes ..	(f) 88,630	56,591	35,874	(g) 22,113	(g) 14,192	(g) 5,962	437	220,782
Total ..	278,885	375,639	269,390	79,370	43,004	30,714	467	1,077,469
BUTTER ('000 lb.)								
In Factories	(h) 74,280	(i) 112,180	(j) 101,243	17,360	12,553	8,464	..	326,080
On Dairy and other Farms(k)	4,000	2,393	1,324	1,181	627	1,200	8	10,733
Total ..	78,280	114,573	102,567	18,541	13,180	9,664	8	336,813
CHEESE ('000 lb.)								
In Factories	4,858	33,406	26,932	22,479	1,817	2,268	..	91,760
On Dairy and other Farms(k)	110	98	4	..	8	395	..	615
Total ..	4,968	33,504	26,936	22,479	1,825	2,663	..	92,375
CONDENSED, CONCENTRATED AND POWDERED MILK, ETC. ('000 lb.)								
In Factories	44,197	124,632	(d)	(d)	(d)	(d)	..	(e) 182,861

(a) Includes 3,230,406 gallons of milk, the produce of New South Wales, sent to factories in Victoria and Queensland. (b) Includes 439,040 gallons of milk, the produce of Victoria, sent to factories in New South Wales. (c) Includes 623,908 gallons of milk, the produce of Queensland, sent to factories in New South Wales. (d) Not available for publication. (e) Includes particulars of States marked (d). (f) Includes 218,778 gallons of whole milk, the produce of New South Wales, sent to Victoria. (g) Includes milk used in the production of condensed, concentrated and powdered milk, etc. (h) Includes 528,201 lb. of butter made from cream, the produce of Victoria and Queensland. (i) Includes 1,303,474 lb. of butter made from cream, the produce of New South Wales. (j) Includes 253,348 lb. of butter made from cream, the produce of New South Wales. (k) Estimated.

6. Whole Milk.—(i) *Production and Utilization.* While there has been a decline in the production of whole milk in Australia since 1939–40 the quantities used for the manufacture of cheese and condensory products and those consumed as fluid milk have increased. As a result, there has been a substantial decrease in the quantity of milk used for butter manufacture, and the proportion so used has declined from 78 per cent. in 1938–39 to 63 per cent. in 1946–47. In 1946–47, 62.8 per cent. of the milk supply was used for the production of butter, 8.4 per cent. in the production of cheese, 6.5 per cent. in the production of processed milk products and 22.3 per cent. for all other purposes, including consumption as fluid milk, sweet cream and ice cream.

Details of the production of whole milk for various purposes are shown in the following table for each year 1938–39 and 1943–44 to 1946–47 :—

PRODUCTION AND UTILIZATION OF WHOLE MILK : AUSTRALIA.

('000 gallons.)

Year.	Total Production.	Quantity used for—			
		Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensory Products.	Other purposes
1938–39	1,189,174	925,308	64,994	33,367	165,505
1943–44	1,066,679	733,451	77,963	63,253	192,012
1944–45	1,012,830	670,206	76,533	62,440	203,651
1945–46	1,077,469	701,819	89,555	65,313	220,782
1946–47	1,079,640	678,293	91,086	70,450	239,811

In the following table, particulars of production of whole milk in the several States are shown for the years 1938–39 to 1946–47. Victoria is the principal milk-producing State and in 1946–47 output from that State, viz., 445.5 million gallons represented 41.3 per cent. of total production. Output from New South Wales was 254.1 million gallons or 23.5 per cent. of the total and that of Queensland 207.5 million gallons (19.2 per cent.). Production in the remaining States accounted for 16.0 per cent. of the total Australian output.

TOTAL PRODUCTION OF WHOLE MILK.

('000 gallons.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1938–39 ..	311,384	377,881	347,336	72,521	45,562	34,140	350	1,189,174
1943–44 ..	297,175	360,539	260,998	78,172	43,150	26,285	360	1,066,679
1944–45 ..	262,939	360,501	247,253	72,154	40,416	29,184	383	1,012,830
1945–46 ..	278,885	375,639	269,390	79,370	43,004	30,714	467	1,077,469
1946–47 ..	254,094	445,536	207,465	93,944	46,038	32,080	483	1,079,640

(ii) *Production per Cow.* The annual quantity of milk produced per dairy cow reaches as high as 1,000 gallons, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 it averaged considerably under 300 gallons per annum. In recent years not only has there been an improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924, the yield of 392 gallons in 1931 constituting a record. The annual average yields per cow given in the following table are based on the number of dairy cows which were in milk during any part of the year. The average given is, therefore, below that for cows which were yielding during the greater part of the year. It should be noted that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend :—

MILK PRODUCTION.

Heading.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia. (b)
1938–39—								
Dairy Cows(a) .. No.	994,155	889,719	961,674	152,686	119,183	93,154	1,041	3,211,612
Production '000 gal.	311,384	377,882	347,336	72,521	45,562	34,140	350	1,189,175
Aver. per cow .. gal.	313	425	361	475	382	366	336	370
1942–43—								
Dairy Cows(a) .. No.	935,756	888,786	1,027,630	159,850	129,213	84,952	1,118	3,227,305
Production '000 gal.	303,502	381,640	289,808	78,563	46,346	29,371	400	1,129,630
Aver. per cow .. gal.	324	429	282	491	359	346	358	350
1943–44—								
Dairy Cows(a) .. No.	922,867	875,980	1,029,060	159.487	133,931	77,786	1,183	3,200,294
Production '000 gal.	297,175	360,532	260,996	78,172	43,156	26,288	360	1,066,679
Aver. per cow .. gal.	322	412	254	490	322	338	304	333
1944–45—								
Dairy Cows(a) .. No.	911,146	866,998	1,012,118	161,815	137,552	75,224	1,258	3,166,111
Production '000 gal.	262,939	360,501	247,253	72,154	40,416	29,184	383	1,012,830
Aver. per cow .. gal.	289	416	244	446	294	388	304	320
1945–46—								
Dairy Cows(a) .. No.	884.469	835.300	994,606	156,027	135,475	74.689	1,368	3,081,934
Production '000 gal.	278,885	375,639	269.390	79,370	43,004	30,714	467	1,077,469
Aver. per cow .. gal.	315	450	271	509	317	411	341	350
1946–47—								
Dairy Cows(a) .. No.	857,745	844.302	950,745	157,047	132.828	74,530	1,612	3,018,809
Production '000 gal.	254,094	445,536	207,465	93,944	46,038	32,080	483	1,079,640
Aver. per Cow .. gal.	296	528	218	598	347	430	300	358

(a) Mean for the year. (b) Excludes Northern Territory.

7. **Butter Production.**—The quantity of butter produced in Australia depends chiefly upon seasonal conditions. There was a steady increase in the annual output of butter for many years prior to the 1939–45 War. The average annual production rose from 126,000 tons for the five years ended 1928–29 to 195,000 tons for the five years ended 1938–39.

The output of 212,000 tons in 1939–40 was a record. Production has declined considerably since that year and during 1946–47 amounted to approximately 143,300 tons. The factors contributing to this decline include unfavourable seasons, transfer of man-power owing to the war, shortages of fertilizers for pastures and change in some factories from butter to cheese manufacture. These figures include butter produced on farms which has shown a steady decline from about 8,700 tons in 1938–39 to 4,500 tons in 1946–47.

The following table shows production of butter in factories in each State for the years 1938–39 and 1943–44 to 1946–47.

BUTTER PRODUCTION IN FACTORIES.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.(a)
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39	50,822	56,611	68,919	7,836	6,545	4,053	194,786
1943–44	39,222	48,864	45,276	8,049	6,155	3,268	150,834
1944–45	32,019	46,443	42,415	6,977	5,676	3,643	137,173
1945–46	33,161	50,080	45,198	7,750	5,604	3,778	145,571
1946–47	26,958	59,387	33,078	9,242	6,000	4,191	138,856

(a) Northern Territory and Australian Capital Territory : Nil.

The table below shows the monthly production of factory butter in Australia in each of the years 1938–39 and 1943–44 to 1946–47. The annual output of farm butter is also shown.

PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS : AUSTRALIA.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Tons.	Tons.	Tons.	Tons.	Tons.
Factories—					
July	9,415	7,142	6,124	6,709	7,084
August	11,645	8,224	8,586	8,643	8,790
September	15,531	11,591	12,538	10,908	11,105
October	20,485	16,955	16,831	15,909	14,415
November	22,561	20,927	15,955	16,051	14,904
December	20,710	20,997	15,193	16,503	15,178
January	15,872	18,688	15,409	14,338	13,303
February	15,816	14,670	12,129	14,175	12,699
March	17,729	12,194	12,922	14,691	13,384
April	16,583	7,748	8,707	11,738	10,782
May	15,568	6,265	6,784	9,248	9,209
June	12,871	5,433	5,995	6,658	8,003
Factory Total	194,786	150,834	137,173	145,571	138,856
Made on Farms	8,714	5,448	4,790	4,792	4,497
Grand Total ..	203,500	156,282	141,963	150,363	143,353

8. **Cheese Production.**—For many years the production of cheese in Australia ranged about 13,400 tons per annum. By 1932–33 production had risen to 16,500 tons and, apart from minor fluctuations, has continued to rise until 1946–47, when the record output of approximately 42,000 tons was recorded. The States contributing chiefly towards this increase are Victoria, Queensland and South Australia.

The following table shows production of cheese in factories in each State in the years 1938–39 and 1943–44 to 1946–47 :—

CHEESE PRODUCTION IN FACTORIES.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.(a)
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39	3,211	8,637	7,031	8,239	436	1,420	28,974
1943–44	2,399	11,868	10,733	8,805	792	1,052	35,649
1944–45	1,964	12,205	10,101	8,244	822	1,122	34,458
1945–46	2,169	14,913	12,023	10,035	811	1,013	40,964
1946–47	2,029	17,615	7,720	12,768	1,009	1,070	42,211

(a) Northern Territory and Australian Capital Territory : Nil.

The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938–39 and each of the years 1943–44 to 1946–47.

PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS : AUSTRALIA.

Month.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Tons.	Tons.	Tons.	Tons.	Tons.
Factories—					
July	1,517	1,755	1,572	1,643	2,177
August	1,950	2,288	2,555	2,524	3,038
September	2,820	3,602	3,918	3,865	4,173
October	4,028	5,250	5,273	5,196	5,447
November	3,990	5,521	4,858	5,147	5,604
December	3,462	4,975	4,112	4,832	5,017
January	2,212	3,627	3,264	3,512	3,737
February	1,715	2,634	2,433	3,224	2,781
March	1,826	2,126	2,471	3,526	2,793
April	1,656	1,448	1,496	2,894	2,489
May	1,898	1,199	1,279	2,570	2,608
June	1,900	1,224	1,227	2,031	2,347
Factory Total	28,974	35,649	34,458	40,964	42,211
Made on Farms	330	176	162	274	132
Grand Total ..	29,304	35,825	34,620	41,238	42,343

9. **Condensed, Concentrated and Powdered Milk, etc., Production.**—The manufacture of these products has expanded greatly since 1938–39 due mainly to the demand to meet the needs of the Services during the 1939–45 War. The output for the years 1938–39 and 1942–43 to 1945–46 was as follows :—

PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED MILK, ETC.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	lb.	lb.	lb.	lb.	lb.
New South Wales	11,204,574	34,870,506	45,302,427	39,300,026	44,196,736
Victoria	52,475,320	109,746,110	113,642,284	116,030,363	124,632,335
Other States (*a*)	8,600,558	12,639,360	15,269,448	14,968,080	14,032,410
Total	72,280,452	157,255,976	174,214,159	170,298,469	182,861,481

(*a*) Separate details not available for publication.

10. **Local Consumption of Butter and Cheese.**—The production of butter and cheese less net exports and adjusted to account for movements in stocks, represents the quantity available for consumption in Australia.

As previously mentioned, the quantity of butter required by the Armed Services based upon Australia limited supplies during the war years for export overseas and for consumption in Australia. The former had diminished to such an extent that, in order to prevent further decline, it became necessary to introduce a system of butter rationing on 7th June, 1943. The rate was fixed at 8 oz. per head per week, but was reduced to 6 oz. per week as from 7th June, 1944, at which level it still remains.

Cheese was not rationed, although the supplies available for civil needs were limited to the residue after Service needs and exports had been met. This had the effect of limiting consumption below the level it would have attained if there had been no such restriction. Nevertheless, consumption of cheese rose during the war to offset, in part, the reduced consumption of butter due to rationing.

The following table shows details of the production and disposals of butter and cheese for the periods 1937–39 and 1943 to 1947.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE : AUSTRALIA.

('000 tons.)

Period.	Changes in Stock.	Production.	Exports.	Consumption by—		Civilian consumption per head per annum.
				Services.	Civilians.	
			BUTTER.			
						lb.
1937–39 (Average) ..	..	191.0	90.0	..	101.0	32.9
1943	+ 1.0	165.5	50.0	18.0	96.5	33.5
1944	− 4.4	145.8	46.2	23.3	80.7	27.5
1945	+ 1.3	141.4	39.7	21.9	78.5	26.1
1946	− 3.1	146.8	65.1	2.0	82.8	25.3
1947	+ 4.2	156.8	70.3	(a)	82.3	24.3
			CHEESE.			
						lb.
1937–1939 (Average)	..	24.9	11.5	..	13.4	4.4
1943	..	36.0	14.0	10.0	12.0	4.1
1944	− 0.1	34.8	14.3	2.5	18.0	6.1
1945	+ 4.3	35.5	10.2	3.0	18.0	6.0
1946	− 0.5	43.1	18.4	4.5	20.7	6.3
1947	+ 0.3	43.2	24.9	(a)	18.0	5.3

(a) Included with Civilians.

11. Marketing of Dairy Products.—(i) *The Dairy Produce Export Control Act* 1924–47. Introduced at the request of the dairying industry this Act was passed by the Commonwealth Parliament with the object of organizing the oversea marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. It dealt with matters relating to the organization and supervision of oversea marketing of dairy produce. In the course of its functions the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in oversea freights and insurance rates, and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvement and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce and the securing of new markets and the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, reducing its membership from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold.

(ii) *The Dairy Produce Export Charges Act* 1924–1937. This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.

(iii) *War-time Marketing.* Reference to the marketing arrangements which operated during the 1939–45 War was made in Chapter XXVIII. "Miscellaneous", pp. 1108–1110 of Official Year Book No. 36.

12. **Butter and Cheese Contracts.**—(i) *Butter.* At the outbreak of war in September, 1939, a contract was arranged between the Governments of the Commonwealth and the United Kingdom whereby the latter undertook to purchase Australia's surplus butter and cheese. The following table indicates the periods covered, and prices per cwt. f.o.b. Australian currency for the various grades of butter, including whey butter, for this and subsequent contracts.

The conditions of sale provided for payment of 90 per cent. on shipment, and the balance 28 days after arrival or due date of arrival.

A further contract for the year 1940–41 was entered into with the United Kingdom Government, which agreed to take up to 100,000 tons of butter at the same prices as in the previous year. For the year 1941–42, second, pastry and all whey butters were excluded; moreover the butter target was reduced to 57,000 tons to permit of diversion to cheese production at the request of the United Kingdom Government.

Prices were increased as from 1st July, 1942, as shown in the table. Also second grade butter was re-included towards the end of 1942 and the Ministry sought 10,000 tons of dry butterfat at the following prices per cwt. f.o.b. Australian currency:—Grade 1, 195s. 7½d.; Grade 2, 181s. 3d. Actually 2,203 tons of dry butterfat were exported during that period.

Pastry and whey butters were re-included as from 1st July, 1943.

While the 1943–44 prices were the same as those applying for 1942–43, the United Kingdom Government agreed additionally to reimburse the Commonwealth Government to the extent of subsidy paid on butter and cheese exported on Ministry account during the year ended 31st March, 1944. Although provision was made in the several contracts for the supply and purchase of stated quantities of butter, the decline in production and the increased demand by Australian and Allied Services based on Australia resulted in the quantities actually shipped being less than those stipulated.

The purchase of butter in 1944–45 and subsequent years has been covered by the Long-Term Purchase Agreement (*vide* sub-para. (iii) following).

PRICES OF BUTTER, UNITED KINGDOM CONTRACTS.

Period.	Prices per cwt. f.o.b. Australian currency.						
	Choice.	1st.	2nd.	Pastry.	Whey, 1st.	Whey, 2nd.	Whey, Pastry.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
13th November, 1939 to 30th June, 1940	137 2¼	135 7½	131 1¾	127 6	127 6	122 6	117 6
1940–41							
1941–42							
1942–43	142 9¾	141 3	136 9¼	127 6	127 6	122 6	117 6
1943–44	142 9¾	141 3	136 9¼	133 1½	133 1½	128 1½	123 1½
1944–45	184 8¼	183 1½	178 7¾	175 0	175 0	170 0	165 0
1945–46							
1946–47	216 10½	215 4	210 7½	206 10½	206 10½	201 10½	196 10½
1947–48	254 4½	252 10	248 1½	244 4½	244 4½	239 4½	234 4½

(ii) *Cheese.* The following table indicates the periods covered and prices per cwt. f.o.b. Australian currency for the various grades of cheese as provided by the several contracts between the Commonwealth and United Kingdom Governments. Conditions for payment were on the same terms as for butter.

For the year 1941–42, the United Kingdom sought diversion from butter to cheese production, and undertook to purchase maximum quantities, with a minimum of 40,000 tons, at increased prices. Prices were increased further for the year 1942–43.

As in the case of butter, the United Kingdom Government agreed to reimburse the Commonwealth Government for subsidy paid on cheese exports since 1st April, 1943.

Although provision was made in the several contracts for the supply and purchase of stated quantities of cheese, the quantities shipped were less than stipulated. Service demands in India, Egypt and elsewhere accounted for the greater part of exports. There was also considerable increase in consumption in Australia, due, no doubt, to the rationing of butter.

When the United Kingdom authorities in 1941 desired greatly increased supplies of cheese, the Committee took action to convert butter-making establishments to cheese-making, the financial burden being distributed over the industry.

As with butter, the purchase of cheese in 1944–45 and subsequent years has been covered by the Long-Term Purchase Agreement (*vide* sub-para. (iii) following).

PRICES OF CHEESE, UNITED KINGDOM CONTRACTS.

Period.	Prices per cwt. f.o.b. Australian currency.					
	Choicest, 1st.		2nd.		3rd.	
	s.	d.	s.	d.	s.	d.
20th November, 1939 to 30th June, 1940	76	6¾	74	0¾	71	6¾
1940–41						
1941–42	83	9	81	3	78	9
1942–43	87	6	85	0	82	6
1943–44						
1944–45	107	6	105	0	102	6
1945–46						
1946–47	126	3	123	9	121	3
1947–48	145	7½	143	1½	140	7½

(iii) *Long Term Purchase Agreement.* Early in 1945 an agreement was completed between the United Kingdom and Australian Governments covering the sale to the former of Australia's surplus butter and cheese for the four years 1944–45 to 1947–48. In the original agreement, prices were stipulated for the initial two years ended June, 1946. In accordance with the terms of the agreement prices were increased for the year 1946–47 and further increases were agreed upon for the year 1947–48, following representations from the Australian Government after having considered recommendations by the Joint Dairy Industry Advisory Committee (*vide* para. 4 above.)

The United Kingdom will undertake responsibility for storage costs if unable to provide ships to lift butter and cheese from store after 90 days, and will make advances against stored stock in this event.

The usual provisions relative to quality, packing, etc. will continue to obtain, but in regard to payment the United Kingdom will pay 97½ per cent. of the value on shipment and a further 2½ per cent. 60 days after the date of the last bill of lading in respect of butter and cheese carried by the vessel.

The extension of the agreement beyond 30th June, 1948 is at present under consideration by the United Kingdom and Commonwealth Governments.

13. **Oversea Trade in Butter, Cheese and Milk.**—The production of butter and cheese in Australia is considerably in excess of local requirements and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon the seasonal conditions. In the immediate pre-war period the quantity of butter and cheese consumed annually in Australia was about 101,000 tons and 13,400 tons respectively, and production in excess of these amounts was available as surplus for export.

Because of the abnormal requirements due to the presence of Australian and Allied Servicemen in the South-West Pacific Area, exports of butter to the United Kingdom were reduced to a level lower than that attained in any year since 1926–27. During 1938–39, 97,000 tons or 95 per cent. of all butter exported was shipped to the United Kingdom, but by 1944–45 exports to this country had decreased to 37,000 tons or 86 per cent. of the total quantity exported. In 1945–46, the quantity rose to 55,000 tons (or 88.8 per cent.) but dropped to 52,000 tons (or 86.2 per cent.) in 1946–47.

With cheese, and for the same reason, increased production has been accompanied by decreased exports. In 1938–39 exports totalled 16,038 tons of which 15,500 tons were exported to the United Kingdom. By 1944–45, however, the quantity exported to the United Kingdom had declined to 2,800 tons or 18 per cent. of the total of 15,000 tons exported. In 1945–46 the quantity rose to 9,200 tons (or 63.0 per cent.) and to 18,300 tons (or 76.5 per cent.) in 1946–47.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to the supervision, inspection and examination of officers appointed for that purpose. These commodities are graded according to quality which has been fixed by regulation as follows :—Flavour and aroma, 50 points ; texture, 30 points ; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality ; at 90 to 92 points, first quality ; at 86 to 89 points, second quality ; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Fuller details, which include actual quantities by States, are to be found in *Production Bulletin* No. 41, Part II.

BULK BUTTER AND CHEESE GRADED FOR EXPORT : AUSTRALIA.

Grade.	Butter.			Cheese.		
	1944–45.	1945–46.	1946–47.	1944–45.	1945–46.	1946–47.
	%	%	%	%	%	%
Choicest	47.76	44.35	48.77	1.14	0.50	1.56
First Quality	42.98	46.36	42.73	52.02	58.76	58.97
Second Quality	7.75	7.56	7.27	46.84	40.74	39.47
Third Quality(*b*)	1.51	1.73	1.23	(*a*)	(*a*)	(*a*)
Total	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Included with Second Quality. (*b*) Includes rejected.

The following tables show the total imports, exports and net exports of butter, cheese and condensed, concentrated, etc., milk and cream.

BUTTER, CHEESE, MILK, ETC. : IMPORTS AND EXPORTS, AUSTRALIA.

Products.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
			IMPORTS.			
Butter	lb.	3,425	25	4,807	167	79
	£A.	286	3	302	11	5
Cheese	lb.	156,188	13,577	58,469	296,026	104,419
	£A.	11,551	1,599	4,693	27,256	13,361
Milk and Cream—condensed, concentrated, etc.	lb.	44,135	238,403	893,948	213.583	108,219
	£A.	1.048	0.277	35.384	7.749	4,873
			EXPORTS.			
Butter	lb.	229,542,779	104.226,518	93,739,086	137,611.340	133,642,282
	£A.	12,891,837	6,870,852	8,249,506	12,271,662	12.569.922
Cheese	lb.	35,924,467	32,974,752	33.516,764	32.770.273	53,661,771
	£A.	1,074,008	1,953,958	1,975,333	1.689,124	2,654,956
Milk and Cream—condensed, concentrated, etc.	lb.	19.106,953	39,251,891	46,871,107	58,620,882	103,115.838
	£A.	791.100	1,447.079	1.780,297	2,155.072	4,234.216
			NET EXPORTS.			
Butter	lb.	229.539.354	104,226,493	93,734,279	137.611,173	133,642,203
	£A.	12,891,551	6,870,849	8,249,204	12,271,651	12.5699,17
Cheese	lb.	35,768,279	32,961.175	33,458,295	32.474,247	53.557.352
	£A.	1,062,457	1,952,359	1,970,640	1,661,868	2,641,595
Milk and Cream—condensed, concentrated, etc.	lb.	19,062,818	39,013.488	45,977,159	58,407,299	103,007.619
	£A.	790,052	1,438.702	1,744.913	2.148.223	4,229,343

§ 3. Pigs and Pig Products.

1. **Pigs.**—Between 1928–29 and 1938–39 the number of pigs fluctuated around one million. In the latter year an upward movement commenced and continued until the record number of 1,797,340 was recorded in 1940–41. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1943–44. Since that year there has been a continuous decline, the number recorded at 31st March, 1947 being 1,273,011. The distribution of pigs among the States and Territories at 31st March, 1947 was— New South Wales, 358,417; Victoria, 290,450; Queensland, 340,150; South Australia, 134,033; Western Australia, 101,719; Tasmania, 47,407; Northern Territory, 208; Australian Capital Territory, 627.

A more accurate index of the development of pig-raising in Australia is provided in the following table which combines, for each of the years 1937–38 to 1946–47, the number of slaughterings with the number returned. The table discloses substantial increases in the number of pigs raised over the period under review :—

NUMBER OF PIGS AND NUMBER SLAUGHTERED : AUSTRALIA.

Year.	Number of Pigs.	Number Slaughtered.	Year.	Number of Pigs.	Number Slaughtered.
1937–38 ..	1,100,082	1,897,430	1942–43(a) ..	1,563,000	2,126,000
1938–39 ..	1,155,591	1,839,597	1943–44(a) ..	1,746,721	1,828,456
1939–40 ..	1,455,341	1,952,552	1944–45(a) ..	1,630,855	1,966,434
1940–41 ..	1,797,340	2,350,358	1945–46(a) ..	1,425,709	1,727,924
1941–42 ..	1,477,303	2,593,927	1946–47(a) ..	1,273,011	b1,580,863

(a) Year ended 31st March. The numbers slaughtered relate to slaughterings for human consumption.
(b) Subject to revision.

Further details relating to pig numbers are given in Chapter XIX. "Pastoral Production."

2. **Pork.**—(i) *Production.* With Allied Servicemen in Australia during the war years, the demand for pork was considerably increased and producers were encouraged to increase production to the highest level attainable in order to meet Service requirements and maintain exports as far as possible. After these requirements had been met, the quantity available for civilian consumption was much less than that normally consumed. In some States the civilian consumption of pork was negligible, but in other parts of Australia, where transport difficulties precluded the marketing of pork in the main centres, civilian consumption was not prohibited. In the following table details of production in each State are shown for the years 1938–39 and 1942–43 to 1946–47 :—

PRODUCTION OF PORK (BONE-IN-WEIGHT).

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39 ..	9,617	10,769	11,844	2,037	1,092	1,623	8	43	37,033
1942–43 ..	11,376	9,963	9,343	3,033	3,863	1,347	17	69	39,011
1943–44 ..	14,532	11,226	8,709	5,892	3,649	1,446	17	11	45,482
1944–45 ..	8,605	11,407	8,249	9,013	4,006	1,270	17	3	42,570
1945–46 ..	6,335	9,595	9,363	4,072	4,749	986	17	3	35,120
1946–47 ..	6,364	7,153	9,011	2,978	3,446	1,039	17	18	30,026

(ii) *Consumption.* For the three pre-war years ended 1938–39 the average annual production of pork was 46,000 tons, of which 14,000 tons were exported, leaving 32,000 tons, or the carcass equivalent of 10.4 lb. per head per annum, available for local consumption.

As in the case of other meats, the demand for pork for the Armed Services and for exports was so great that it was necessary to divert supplies from civilian consumption under the rationing scheme introduced in January, 1944. This resulted in the per capita consumption of pork declining from the pre-war average of 10.4 lb. to 9.0 lb. in 1943, to 6.4 lb. in 1944 and to 4.9 lb. in 1945. Since 1945, there has been a reduction in exports and supplies to the Armed Services and in September 1946, pork was made available to civilians in all States subject to coupon rationing. As a result, consumption per head rose to 5.9 lb. in 1946 and 6.8 lb. in 1946–47. In the following table details of the production and disposal of pork are shown for the periods 1937–39 and 1943 to 1946–47.

PRODUCTION AND DISPOSAL OF PORK (BONE-IN-WEIGHT) : AUSTRALIA.

('000 tons).

Period.	Changes in Stock.	Production.(*a*)	Exports.	Canning.	Consumption by—		Civilian Consumption per head per annum.
					Services.	Civilians.	
							lb.
1937–39 (Average)	..	46	14	..	..	32	10.4
1943	..	39	13	(*b*)	(*b*)	26	9.0
1944	+ 1	51	18	8	5	19	6.4
1945	..	43	16	8	4	15	4.9
1946	− 3	35	13	5	1	19	5.9
1946–47 ..	− 4	30	8	3	(*c*)	23	6.8

(*a*) Includes an estimate of trimmings from baconer carcasses. (*b*) Included with exports Separate details not available. (*c*) Included with civilians.

3. **Bacon and Ham.**—(i) *Production.* As in the case of pork, the increased demand for bacon and ham during the war years stimulated production to a level never previously attained. Production reached its peak in 1944–45 when 56,246 tons of bacon and ham were cured. Details of production are shown by States in the following table for the years 1938–39 and 1942–43 to 1946–47.

PRODUCTION OF BACON AND HAM.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1938–39	11,794	7,370	8,492	2,673	1,894	1,015	..	33,238
1942–43	15,082	8,855	13,057	4,428	4,142	1,238	..	46,802
1943–44	13,913	9,687	11,958	4,605	4,358	1,202	..	45,723
1944–45	20,148	12,103	13,299	4,499	5,007	1,190	..	56,246
1945–46	17,409	9,377	10,699	5,239	4,608	1,255	..	48,587
1946–47	15,830	10,998	9,983	5,069	4,638	1,150	..	47,668

(ii) *Consumption.* For the three pre-war years ended 1938–39 the annual production of bacon and ham averaged 32,400 tons of which 1,000 tons were exported, leaving 31,400 tons, or 10.2 lb. per head per annum, available for local consumption. The presence of large numbers of Allied Servicemen in Australia during the 1939–45 War necessitated the diversion of civilian supplies. Bacon and ham were not included in the list of rationed meat but supplies to be placed on the civilian market were determined after the demands for Services and export requirements had been met. Consumption per head declined in the early stages of the war but by 1944 had been restored to the pre-war level and has since increased to 12.7 lb. in 1946–47. Details of production and disposal of bacon and ham are shown for the periods 1937–39 and 1943 to 1946–47 in the following table.

PRODUCTION AND DISPOSAL OF BACON AND HAM : AUSTRALIA.

('000 tons).

Period.	Changes in Stocks.	Production.	Exports.	Canning.	Consumption by—		Civilian consumption per head per annum
					Services.	Civilians.	
							lb.
1937–39 (Average)	..	32.4	1.0	..	..	31.4	10.2
1943	..	39.0	..	(a)	20.0	19.0	6.6
1944	+0.3	52.0	1.7	3.0	17.0	30.0	10.2
1945	−0.1	51.8	5.9	3.0	13.0	30.0	10.0
1946	..	48.9	2.1	5.1	2.2	39.5	12.1
1946–47	−0.2	47.7	3.3	2.1	(b)	42.5	12.7

(a) Included with Services. (b) Included with civilians.

4. **United Kingdom Contracts.**—Details relating to the several war-time contracts and the more recent Long-Term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale and purchase of Australia's surplus production of meats (including pigments) are included in Chapter XIX. "Pastoral Production.

5. **Oversea Trade in Pigs and Pig Products.**—The total oversea trade in pigs and pig products for the years 1938–39 and 1943–44 to 1946–47 is shown in the following table :—

PIG PRODUCTS : OVERSEA TRADE, AUSTRALIA.

Particulars.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
			PIGS.			
Imports.. ..	No.	28	11	33	17	42
	£A.	1,007	691	1,334	863	2,818
Exports.. ..	No.	69	50	380	55	623
	£A.	621	497	1,802	555	3,975
Net Exports ..	No.	41	39	347	38	581
	£A.	−386	−194	468	−308	1,157
			BACON AND HAM.(*a*)			
Imports.. ..	lb.	9,681	13	48	106	63
	£A.	597	1	9	18	14
Exports ..	lb.	1,739,053	14,954,984	11,045,954	18,856,610	14,674,450
	£A.	119,994	1,172,784	905,545	1,700,266	1,404,610
Net Exports ..	lb.	1,729,372	14,954,971	11,045,906	18,856,504	14,674,387
	£A.	119,397	1,172,783	905,536	1,700,248	1,404,596
			LARD.(*b*)			
Imports.. ..	lb.	106,821	9,733	60	..	10
	£A.	3,065	713	..	..	..
Exports.. ..	lb.	5,490,959	2,752,038	5,433,516	680,922	184,412
	£A.	67,744	61,671	164,147	24,870	7,751
Net Exports ..	lb.	5,384,138	2,742,305	5,433,456	680,922	184,402
	£A.	64,679	60,958	164,147	24,870	7,751
			FROZEN PORK.			
Imports.. ..	lb.	31,805	..	..	..	12,315
	£A.	1,770	..	..	..	277
Exports.. ..	lb.	30,716,417	16,017,199	39,881,804	30,772,905	18,705,329
	£A.	882,117	587,321	1,436,706	1,204,846	843,935
Net Exports ..	lb.	30,684,612	16,017,199	39,881,804	30,772,905	18,693,014
	£A.	880,347	587,321	1,436,706	1,204,846	843,658

(*a*) Excludes Tinned Bacon for year 1938–39. (*b*) For years 1938–39, 1943–44 and 1944–45 includes Lard Oil and Refined Animal Fats.

NOTE.—The minus sign (—) signifies net imports.

§ 4. Value of Dairy Production (including Pig Farming).

1. **Value of Production—Gross and Net—Years 1944–45 and 1945–46.**—The values of dairy production on a gross, local and net basis are shown in the following table. Production values for this and other industries are dealt with more fully in Chapter XXVIII. "Miscellaneous".

GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION, 1944–45 and 1945–46.

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)	Depreciation (estimated)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Production.		
1944–45.							
	£	£	£	£	£	£	£
New South Wales ..	18,315,000	1,833,000	16,482,000	2,323,000	(b) 22,000	14,137,000	(c)
Victoria	17,864,037	626,208	17,237,829	2,099,564	466,927	14,671,338	25,000
Queensland ..	13,597,000	350,000	13,247,000	1,560,000	310,000	11,377,000	135,000
South Australia ..	4,439,857	143,917	4,295,940	721,519	118,322	3,450,099	15,027
Western Australia..	2,998,465	96,284	2,902,181	887,341	216,737	1,798,103	18,311
Tasmania ..	1,419,490	52,360	1,367,130	607,650	(b) 16,540	742,940	9,850
Total ..	58,633,849	3,101,769	55,532,080	8,199,074	1,150,526	46,182,480	d)203,188
1945–46.							
	£	£	£	£	£	£	£
New South Wales ..	19,852,000	1,771,000	18,081,000	2,461,000	(b) 30,000	15,590,000	(c)
Victoria	18,866,694	634,064	18,232,630	2,679,070	521,573	15,031,987	25,000
Queensland ..	14,919,000	390,000	14,529,000	1,710,000	340,000	12,479,000	150,000
South Australia ..	4,979,682	161,985	4,817,697	787,386	204,125	3,826,186	15,027
Western Australia..	3,134,633	100,207	3,034,426	888,243	301,779	1,844,404	19,56
Tasmania ..	1,472,540	49,020	1,423,520	630,360	(b) 25,230	767,930	9,360
Total ..	63,224,549	3,106,276	60,118,273	9,156,059	1,422,707	49,539,507	(d)218,95

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils. (c) Not available. (d) Incomplete.

2. **Net Value of Production, 1936–37 to 1945–46.**—In the following table the net value of dairy production and the net value per head of population are shown by States for the years 1936–37 to 1945–46.

NET VALUE OF DAIRY PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
NET VALUE.(a)							
	£	£	£	£	£	£	£
1936–37	9,128,000	10,778,186	4,957,000	1,587,796	554,010	542,070	27,547,062
1937–38	10,181,000	10,495,005	7,443,000	1,891,356	825,354	753,620	31,589,335
1938–39	10,446,000	9,958,474	9,878,000	1,942,994	893,428	662,860	33,781,756
1939–40	10,887,000	12,332,822	9,799,000	2,194,167	905,372	724,850	36,843,211
1940–41	10,740,000	13,080,352	8,417,000	2,161,945	898,181	468,940	35,706,418
1941–42	10,455,000	12,601,657	7,413,000	2,138,139	1,173,362	562,390	34,343,548
1942–43	13,825,000	12,465,847	10,671,000	2,961,598	1,718,014	602,460	42,243,919
1943–44	13,483,000	13,820,686	11,733,000	3,495,314	1,606,525	684,190	44,822,715
1944–45	14,137,000	14,671,338	11,377,000	3,456,099	1,798,103	742,940	46,182,480
1945–46	15,590,000	15,031,987	12,479,000	3,826,186	1,844,404	767,930	49,539,507

(a) No deduction has been made for depreciation and maintenance.

NET VALUE OF DAIRY PRODUCTION—*continued.*

NET VALUE PER HEAD OF MEAN POPULATION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1936–37	3 8 1	5 16 5	5 0 9	2 14 0	1 4 6	2 6 8	4 1 0
1937–38 . ..	3 15 2	5 12 10	7 9 7	3 4 0	1 16 1	3 4 1	4 12 0
1938–39	3 16 5	5 6 3	9 16 3	3 5 5	1 18 8	2 16 0	4 17 6
1939–40	3 18 10	6 10 6	9 12 1	3 13 4	1 18 8	3 0 7	5 5 4
1940–41	3 17 2	6 16 3	8 3 1	3 10 1	1 18 0	1 19 0	5 1 1
1941–42	3 14 8	6 9 1	7 2 11	3 10 6	2 9 4	2 6 11	4 16 3
1942–43	4 17 9	6 6 8	10 4 9	4 16 8	3 11 8	2 10 0	5 17 5
1943–44	4 14 7	6 19 2	11 2 0	5 13 1	3 6 8	2 16 2	6 3 6
1944–45	4 18 1	7 6 6	10 12 5	5 10 7	3 13 9	3 0 4	6 5 11
1945–46	5 7 1	7 8 9	11 9 10	6 0 11	3 15 0	3 1 7	6 13 8

§ 5. Poultry-Farming.

1. **General.**—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions.

Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry. It is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, small numbers of fowls are kept in backyards of some private homes and this helps to maintain domestic needs particularly when eggs are in short supply.

2. **Numbers of Poultry.**—In pre-war years the numbers of the principal kinds of poultry was a normal feature of the annual census of live-stock in all States except Victoria and Tasmania. This collection was suspended during 1941–42 but was resumed in 1942–43 and extended to cover all States. It was not, however, resumed on the previous basis, but was restricted to farms of 1 acre or more producing eggs or poultry for sale. Moreover, the details exclude poultry held by persons (including " backyard " poultry-keepers) producing for their own use as well as those who are producing from areas of less than 1 acre. Because of this incompleteness, details of poultry numbers are not published.

3. **Recorded Production and Disposals of Eggs.**—(i) *Shell Eggs.* Available statistics of the production and disposals of eggs in Australia are restricted to those recorded by the Egg Boards of the several States.

Egg Boards, or authorities appointed to control the marketing of eggs, have operated in the States of New South Wales, Victoria and Queensland for some years, whilst in South Australia the Board commenced to operate in August, 1942. It was not until August, 1943 that Advisory Committees were established in Western Australia and Tasmania. These authorities were created under National Security Regulations. Statistics of recorded production of eggs for Australia as a whole are not available, therefore, prior to 1943–44

In the following table details of receivals and disposals of eggs, as recorded by these authorities, are shown for Australia for the years 1943–44 to 1946–47.

SHELL EGGS: RECEIVALS AND DISPOSALS RECORDED BY EGG BOARDS, AUSTRALIA.

Particulars.	Year ended June—			
	1944.	1945.	1946.	1947.
RECEIVALS.				
	Doz.	Doz.	Doz.	Doz.
Stock held at beginning of year	178,105	7,434	14,160	1,295
Receivals from Consignors ..	64,164,506	80,898,566	90,598,524	95,750,988
Receivals from Producer Agents	24,999,998	23,124,060	22,454,126	26,767,481
Withdrawals from Cold Storage	132,438	859,345	1,647,995	1,343,087
Interstate Transfers ..	1,848,270	165,870	858,045	385,650
Other Sources	750	..	110,100	1,740
Total	91,324,067	105,055,275	115,682,950	124,250,241
DISPOSALS.				
	Doz.	Doz.	Doz.	Doz.
Sales by Egg Boards ..	39,767,318	45,617,933	45,596,855	40,295,865
Sales by Producer Agents ..	24,999,998	23,124,060	22,454,126	26,767,481
Packed for Cold Storage ..	127,055	913,945	8,814,906	17,764,037
Packed for Powder ..	10,557,050	17,901,730	11,055,022	7,995,720
Packed for Pulp	13,430,403	16,490,811	26,089,026	30,149,776
Interstate Transfers ..	1,848,270	165,870	858,045	385,650
Other Disposals	586,539	826,766	813,675	887,412
Stocks held at end of year ..	7,434	14,160	1,295	4,300
Total	91,324,067	105,055,275	115,682,950	124,250,241

There has been a pronounced upward movement in the recorded production (i.e. receivals by Egg Boards) of eggs over the period covered by the previous table from 89,165,000 dozen in 1943–44 to 122,518,000 dozen in 1946–47. The movement in production in the respective States is shown in the following table.

SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS.

(Unit: Dozen).

State.	1943–44.	1944–45.	1945–46.	1946–47.
New South Wales	41,887,727	47,457,664	49,807,075	54,100,235
Victoria	23,228,278	27,952,482	30,932,944	37,110,328
Queensland	7,211,966	9,500,596	11,789,924	9,421,586
South Australia	9,802,072	11,138,438	12,389,672	14,252,300
Western Australia	6,074,359	6,752,228	6,967,711	6,735,580
Tasmania	960,102	1,221,218	1,165,324	898,440
Total	89,164,504	104,022,626	113,052,650	122,518,469

(a) Receivals from consignors and producer agents.

(ii) *Egg Pulp.* Prior to the 1939–45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes, in addition to meeting increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

LIQUID WHOLE EGG : PRODUCTION RECORDED BY EGG BOARDS.

State.	1943–44.	1944–45.	1945–46.	1946–47.
	lb.	lb.	lb.	lb.
New South Wales	5,814,240	8,762,311	11,929,681	14,575,545
Victoria	5,031,440	7,626,573	8,296,340	12,854,130
Queensland	1,174,320	1,418,996	2,526,109	1,649,989
South Australia	4,494,848	4,604,665	7,121,845	7,073,198
Western Australia	901,450	882,646	1,122,198	1,295,067
Tasmania	101	500,220	519,014	247,115
Total	17,416,399	23,795,411	31,515,187	37,695,044

In addition to liquid whole egg, New South Wales also produced liquid egg whites and liquid egg yolks. Output in 1946–47 amounted to 213,104 lb. and 123,359 lb. respectively compared with 196,082 lb. and 61,276 lb. respectively in the previous year.

(iii) *Egg Powder.* The production of dried egg powder was not established in Australia until 1942, when the industry was introduced to treat Australia's surplus eggs so as to maintain exports to the United Kingdom. The shortage of refrigerated shipping space precluded the export of shell eggs so they were converted into powdered form. Following the outbreak of war in the Pacific in December, 1941, when Australia undertook responsibility for the feeding of the fighting services in the South-West Pacific Area, the bulk of the egg powder produced was diverted, however, for use by Australian and Allied Servicemen. Since the termination of hostilities in 1945, the manufacture of egg powder has been maintained at a high level for export purposes. A market for this product in Australia has not yet been established due no doubt to the availability of fresh eggs.

Details of production of egg powder are shown in the table below.

PRODUCTION OF EGG POWDER.

State.	1943–44.	1944–45.	1945–46.	1946–47.(*a*)
	lb.	lb.	lb.	lb.
New South Wales	1,407,034	1,918,244	1,662,094	1,945,273
Victoria	1,044,353	1,361,179	940,954	1,781,726
Queensland	..	..	..	..
South Australia	663,435	1,093,200	567,907	591,312
Western Australia	355,781	406,074	391,912	..
Tasmania	..	..	..	..
Australia	3,470,603	4,778,697	3,562,867	4,318,311

(*a*) Includes sugar-dried egg powder.

4. **Consumption of Eggs.**—Statistics of egg production must necessarily be accepted with some reserve. Owing to the difficulties experienced in obtaining a complete census of output, it is more expedient to compute a figure based on the best data available. The production shown in the following table, which shows also details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control plus an estimate of production from uncontrolled areas and an estimate of the production of "back yard" poultry-keepers. The estimates of total production obtained have been checked with data from other sources and found to be reasonably in accord.

ESTIMATED PRODUCTION AND DISPOSAL OF EGGS : AUSTRALIA.

(Unit : '000 tons).(*a*)

Period.	Changes in Stock.	Estimated Total Production.	Exports (Eggs in Shell).	For Drying and Pulping. (*c*)	Consumption by—		Civilian consumption per head per annum.
					Services.	Civilians.	
							lb.
1936–37 to 1938–39 (Average) ..	(*b*)	89.5	8.1	3.2	..	78.2	25.5
1943	..	100.4	..	13.6	7.3	79.5	27.4
1944	+0.2	113.0	..	19.0	6.7	87.1	29.7
1945	..	121.5	7.5	20.3	6.4	87.3	29.0
1946	−0.7	120.1	10.3	20.4	1.9	88.2	26.9
1947	−0.9	120.7	8.5	26.0	(*d*)	87.1	25.8

(*a*) The average weight of an egg in Australia is taken as 1.75 oz. (*b*) Not available. (*c*) Including Wastage. (*d*) Included with Civilians.

Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of civilian population per annum are shown in the following table :—

SUPPLIES OF EGGS AND EGG PRODUCTS MOVING INTO CIVILIAN CONSUMPTION : AUSTRALIA.

(lb. per head per annum).

Commodity.	Average 1936–37 to 1938–39.	1944.	1945.	1946.	1947.(*c*)
Shell Eggs	25.7	29.7	29.0	26.9	25.8
Egg Powder(*a*)	..	..	..	..	..
Liquid Whole Egg(*a*)	0.9	1.9	3.1	2.2	2.5
Total Shell Equivalent—					
lb. per Head	26.6	31.6	32.1	29.1	28.3
No. per Head(*b*)	243	289	293	266	259

(*a*) In terms of weight of shell eggs. (*b*) The average weight of an egg in Australia is taken as 1.75 oz. (*c*) Includes consumption by Services in Australia.

5. **Marketing of Eggs.**—(i) *United Kingdom Contracts.* Commencing in 1939–40, annual contracts have been entered into between the Governments of the Commonwealth and the United Kingdom for the sale and purchase at agreed prices of Australia's surplus

shell eggs, egg pulp and egg powder. During the war years lack of shipping facilities curtailed the export of shell eggs, while the demands of the Armed Forces based on Australia considerably reduced the quantity of egg powder available for shipment to the United Kingdom.

The contract for the 1947–48 season provided for the sale and purchase of Australia's surplus eggs and egg products at prices considerably in advance of those operating in previous years. The contract specified maximum quantities of 30 million dozen shell eggs, 13,500 tons of whole egg pulp, 2,700 tons of sugared egg powder and 450 tons of whole egg powder. The price for shell eggs was proportionately higher than for egg products in order to give effect to the United Kingdom's desire to obtain maximum shipments in the form of shell eggs.

Early in 1948 an agreement was entered into between the Governments of the Commonwealth and the United Kingdom covering the sale and purchase of eggs, egg pulp and egg powder for the five seasons 1948–49 to 1952–53. The agreement envisages progressive expansion in the export of eggs from Australia with ultimate objective target of the equivalent of 105 million dozen eggs in all forms. Prices for the initial three seasons of the agreement, i.e. 1948–49, 1949–50 and 1950–51, have been determined, these representing further increases on those operating for 1947–48. Prices for the latter two seasons of the agreement will be decided by negotiations between the two Governments prior to sixteen months before the season to which they apply. The agreement stipulates the practices to be followed in packing shell eggs to ensure the minimum of deterioration and specifies the following order of preference in the supply of eggs and egg products to the United Kingdom, viz. :—(i) eggs in shell (to be shipped between 1st June and 24th December of each season); (ii) frozen whole egg pulp; (iii) dried sugared egg; (iv) dried whole egg. Eggs suitable for export during the period June to December are not to be processed into pulp or powder. Payment of 97½ per cent. of the contract price will be made at the time of shipment and the balance within 28 days of arrival in the United Kingdom.

The prices stipulated in the several contracts for eggs and egg products since 1939–40 are shown in the following table.

EGGS AND EGG PRODUCTS: PRICES UNDER UNITED KINGDOM-AUSTRALIA CONTRACTS.

(*Australian Currency, f.o.b. Australian Ports.*)

Period.	Eggs in Shell.(a)	Frozen Whole Egg Pulp.	Whole Egg Powder.	Sugared Egg Powder.
	Per doz. *s. d.*	Per lb. *s. d.*	Per lb. *s. d.*	Per lb. *s. d.*
1939–40	1 2.7	..	..	..
1940–41	1 4.2	..	..	
1941–42	1 4.2	0 9.6	4 9.6	
1942–43	..	..	4 9 6	
1943–44	..	..	4 9.6	
1944–45	1 8	1 5	6 6	
1945–46	1 8	..	..	
1946–47	1 8	1 5	6 6	..
1947–48	2 1	1 6¾	6 6½	4 11⅜
1948–49	2 4	1 8¾	7 0	5 1
1949–50	2 4	1 8¾	7 0	5 1
1950–51	2 4	1 8¾	7 0	5 1

(a) Price for pack of 15 lb. per long hundred (ten dozens); proportionate adjustments made for other packs.

(ii) *War-time Marketing.* Prior to the 1939–45 War, no Commonwealth legislative control was exercised over the marketing of Australian eggs. Overseas publicity and research into problems of the egg industry were managed by a voluntary organization known as the Egg Producers' Council, which was financed by the proceeds from an inspection fee imposed on eggs in shell exported. State Egg Marketing Boards operated in New South Wales, Queensland and Victoria. During the initial stages of the war, administration of the United Kingdom contracts was handled by the Department of Commerce, assisted by an Egg Supervision Committee constituted under the Egg Control Regulations of 1939.

In July, 1943 the Commonwealth Government appointed a Controller of Egg Supplies with Deputy Controllers in each State under the National Security (Egg Industry) Regulations. The Regulations also provided for the appointment of an Egg Industry Advisory Committee consisting of the Controller of Egg Supplies as chairman and the Deputy Controllers as members. Controlled areas for the purpose of the National Security (Egg Industry) Regulations were defined in respect of each State. Wide powers were vested in the Controller of Egg Supplies enabling him to purchase and sell eggs and egg products on behalf of the Commonwealth; to supervise licences for exports so that domestic requirements could be met; to manage and control the marketing and shipment of eggs, the property of the Commonwealth; and to perform various other functions relating to the production, manufacture, grading, treatment, processing, consumption, storage, etc., of eggs and egg products.

The Egg Supplies Control continued to operate during 1947 under the Defence (Transitional Provisions) Act, 1946 but ceased to function on 31st December, 1947.

(iii) *Egg Export Control Act* 1947. Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards which became responsible for stabilizing prices and marketing of eggs produced in the respective States. In order to assist in marketing Australia's surplus production of eggs under the Long Term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, is empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board is authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consists of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

6. **Oversea Trade in Poultry Products.**—The Australian overseas export of poultry products has in the past been confined chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. New South Wales, Victoria and South Australia are at present the largest exporters. Exports of eggs from Australia rose from less than 3 million dozen valued at £219,000 in 1928–29 to 21.7 million dozen valued at more than £1.1 million in 1934–35, but declined to 10.3 million dozen in 1939–40. A high level of exports in 1940–41 was followed by a steep decline in 1941–42 and a further decrease in 1942–43 and 1943–44 to almost negligible quantities. Following a slight increase in 1944–45, exports rose to 7.3 million dozen in 1945–46 and to 17.5 million dozen valued at £1,416,519 in 1946–47.

Prior to the 1939–45 War, exports of egg contents were small and in 1939–40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements and since the close of the war there has been further expansion. In 1946–47, 29.8 million lb. of egg contents, valued at £3,097,208, were exported.

Since the close of the war there has also been a marked increase in the export of frozen poultry, exports in 1946–47 amounting to 957,724 pair, valued at £872,257.

The oversea trade during the four years ended 1946–47 in comparison with 1938–39 was as follows :—

POULTRY PRODUCTS : OVERSEAS TRADE, AUSTRALIA.

Australian Currency Values.

Particulars.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
LIVE POULTRY.						
Imports	No.	29	4	..	26	52
	£	139	28	..	188	499
Exports	No.	2,189	8,900	7,352	16,562	115,798
	£	970	7,970	6,766	10,745	7,308
Net Exports ..	No.	2,160	8,896	7,352	16,536	115,746
	£	831	7,942	6,766	10,557	6,809
FROZEN POULTRY.						
Imports	pair	(a) 83	(a) 47	..	3	..
	£	8	4	..	3	..
Exports	pair	21,768	44,825	44,663	283,107	957,724
	£	19,917	36,077	43,774	208,635	872,257
Net Exports ..	pair	(b)	(b)	44,663	283,104	957,724
	£	19,909	36,073	43,774	208,632	872,257
EGGS.						
Imports	doz.	105,330	8	25	100	202
	£	8,188	30	8	208	153
Exports	doz.	10,144,344	361,885	520,910	7,291,224	17,493,879
	£	638,159	32,552	51,551	638,014	1,416,519
Net Exports ..	doz.	10,039,014	361,877	520,885	7,291,124	17,493,677
	£	629,971	32,522	51,543	637,806	1,416,366
EGG CONTENTS.						
Imports	lb.	68,567	..	4	600	456
	£	4,936	..	1	173	348
Exports	lb.	650,470	3,894,242	2,833,677	17,689,631	29,803,117
	£	23,065	343,941	391,410	1,452,066	3,097,208
Net Exports ..	lb.	581,903	3,894,242	2,833,673	17,689,031	29,802,661
	£	18,129	343,941	391,409	1,451,893	3,096,860

(a) Unit : lb. (b) Quantity not available.

7. **Value of Poultry Products—Gross and Net.**—(i) *General.* Difficulty is experienced in obtaining complete figures for the production of poultry products. The following table sets out the values accruing to the poultry industry for Australia on a gross, local and net basis, and has been compiled from data actually collected or carefully estimated by the State Statisticians :—

GROSS, LOCAL AND NET VALUE OF POULTRY PRODUCTS, 1944–45 AND 1945–46.

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Feed and Other Costs.	Net Value of Production. (a)
			1944–45.		
	£	£	£	£	£
New South Wales ..	9,536,000	843,000	8,693,000	2,978,000	5,715,000
Victoria	7,316,695	563,751	6,752,944	1,160,308	5,592,636
Queensland.. ..	1,748,000	235,000	1,513,000	582,000	931,000
South Australia ..	2,099,400	206,495	1,892,905	597,996	1,294,909
Western Australia ..	1,213,719	228,649	985,070	281,000	704,070
Tasmania	642,720	48,200	594,520	31,860	562,660
Total ..	22,556,534	2,125,095	20,431,439	5,631,164	14,800,275
			1945–46.		
	£	£	£	£	£
New South Wales ..	10,056,000	948,000	9,108,000	3,221,000	5,887,000
Victoria	7,374,225	553,065	6,821,160	1,154,780	5,666,380
Queensland.. ..	2,219,000	302,000	1,917,000	745,000	1,172,000
South Australia ..	2,147,469	218,430	1,929,039	678,208	1,250,831
Western Australia ..	1,173,810	242,307	931,503	347,974	583,529
Tasmania	650,140	48,760	601,380	32,230	569,150
Total ..	23,620,644	2,312,562	21,308,082	6,179,192	15,128,890

(a) No deduction has been made for depreciation and maintenance.

(ii) *States*, 1936-37 *to* 1945–46. In the following table the net value of poultry products and the net value per head of population are shown by States for the years 1936-37 to 1945-46 :—

NET VALUE OF POULTRY PRODUCTS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			NET VALUE.(a)				
	£	£	£	£	£	£	£
1936–37	2,186,000	2,301,568	322,000	244,354	288,624	338,540	5,681,086
1937–38	2,248,000	2,902,026	362,000	326,492	251,000	367,110	6,456,688
1938–39	2,658,000	3,112,609	370,000	430,425	294,216	425,240	7,302,490
1939–40	2,337,000	3,099,861	319,000	532,747	292,756	397,470	6,978,834
1940–41	2,526,000	2,283,963	403,000	398,312	270,055	382,310	6,263,640
1941–42	2,233,000	2,636,248	419,500	440,105	329,571	446,330	6,504,754
1942–43 .. .	3,205,000	4,807,716	576,250	750,063	674,228	523,560	10,536,817
1943–44	4,433,000	5,152,002	786,750	1,131,644	697,049	527,050	12,727,495
1944–45	5,715,000	5,592,636	931,000	1,294,909	701,070	562,660	14,800,275
1945–46	5,887,000	5,666,380	1,172,000	1,250,831	583,529	569,150	15,128,890
			NET VALUE PER HEAD OF MEAN POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1936–37	0 16 4	1 4 10	0 6 6	0 8 4	0 12 9	1 9 2	0 16 8
1937–38	0 16 7	1 11 2	0 7 3	0 11 1	0 11 0	1 11 3	0 18 10
1938–39 .. .	0 19 5	1 13 2	0 7 6	0 14 8	0 12 9	1 15 11	1 1 1
1939–40	0 17 0	1 12 10	0 6 3	0 17 10	0 12 7	1 13 3	0 19 11
1940–41	0 18 2	1 3 9	0 7 10	0 13 4	0 11 5	1 11 10	0 17 9
1941–42	0 15 11	1 7 0	0 8 2	0 14 7	0 13 10	1 17 2	0 18 3
1942–43	1 2 8	2 8 10	0 11 0	1 4 7	1 8 2	2 3 5	1 9 4
1943–44	1 11 1	2 11 10	0 14 9	1 16 7	1 9 0	2 3 3	1 15 1
1944–45	1 19 8	2 15 10	0 17 5	2 1 5	1 8 11	2 5 9	2 0 4
1945–46	2 0 5	2 16 1	1 1 7	1 19 9	1 3 9	2 5 7	2 0 10

(a) No deduction has been made for depreciation and maintenance.

§ 6. Bee-Farming.

1. **General.**—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1945-46 gave an average of 62.4 lb. per hive and the average quantity of wax was 0.82 lb. per hive.

2. **Production of Honey and Bees-wax.**—The number of hives and the production of honey and bees-wax during the year 1945–46 are shown in the following table. As these details have been collected from holdings of one acre and upwards, any production from smaller areas is omitted and consequently the production is understated to that extent. In Victoria and South Australia, however, the compulsory registration of bee-keepers enables the collection to cover all producers and the production for these States is considered to be complete.

BEEHIVES, HONEY AND BEES-WAX, 1945–46.

State.	Beehives.			Honey Produced.		Bees-wax Produced.	
	Productive.	Unproductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	76,340	42,124	118,464	3,915,519	122,360	57,490	7,186
Victoria	*a* 60,403	*a* 23,316	83,719	4,064,274	127,009	43,777	5,472
Queensland ..	28,198	11,931	40,129	1,841,355	53,706	28,887	3,611
South Australia ..	52,712	14,660	67,372	3,182,042	82,866	43,344	4,966
Western Australia	16,693	2,186	18,879	1,688,685	43,885	18,280	2,285
Tasmania ..	4,363	1,323	5,686	212,828	6,172	3,063	459
Aus. Cap. Ter.(*b*)	33	2	35	1,650	52	(*a*) 15	(*a*) 2
Australia ..	238,742	95,542	334,284	14,906,353	436,050	194,856	23,981

(*a*) Estimated. (*b*) Year 1946–47.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. However, in recent years there has been a pronounced upward trend in the output of honey, the figure of approximately 31 million lb. recorded for 1946–47 easily constituting a record.

The table hereunder shows the production of honey and bees-wax for the five years ended 1945–46 in comparison with the year 1938–39.

HONEY AND BEES-WAX PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
				HONEY.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1938–39 ..	2,723,719	1,340,046	1,164,536	2,940,877	754,254	148,473	1,280	9,073,185
1941–42 ..	7,465,926	5,496,851	456,000	4,400,000	1,863,765	80,982	300	19,763,824
1942–43(*a*) ..	1,700,000	4,600,000	500,000	4,300,000	900,000	100,000	..	12,100,000
1943–44 ..	7,722,302	2,544,760	1,788,005	3,000,000	767,712	121,273	3,900	15,947,952
1944–45(*a*) ..	8,850,000	4,260,657	1,011,464	4,652,002	981,597	(*a*)122,000	3,900	19,881,620
1945–46 ..	3,915,519	4,064,274	1,841,355	3,182,042	1,688,685	212,828	1,650	14,906,353
				BEES-WAX.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1938–39 ..	43,780	22,285	17,463	40,257	15,050	1,780	60	140,675
1941–42 ..	124,432	64,484	19,337	40,000	22,296	1,699	..	272,248
1942–43 ..	(*b*)	60,587	(*b*)	60,000	(*b*)	(*b*)	(*b*)	(*b*)
1943–44 ..	105,688	33,796	24,225	40,000	13,500	1,794	34	219,037
1944–45(*a*) ..	146,000	49,119	25,216	57,924	13,480	(*a*) 1,800	34	293,573
1945–46 ..	57,490	43,777	28,887	43,344	18,280	3,063	15	194,856

(*a*) Estimated. (*b*) Not available.

3. **Value of Production—Gross and Net.**—(i) *General.* The following table shows the gross, local and net values of production which have been compiled by the Statisticians of the several States by uniform methods. These data are based upon actual records but, as previously explained, it is known that the production in some States is understated. As production costs are not known they are not taken into account, and consequently, the gross production valued at the farm and net values shown are identical :—

GROSS, LOCAL AND NET VALUE OF BEE PRODUCTS, 1944–45 AND 1945–46.

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Net Value of Production.(a)
		1944–45.		
	£	£	£	£
New South Wales	249,000	21,000	228,000	228,000
Victoria	139,286	18,162	121,124	121,124
Queensland	33,000	5,000	28,000	28,000
South Australia	127,783	15,179	112,604	112,604
Western Australia	24,180	..	24,180	24,180
Tasmania	3,360	170	3,190	3,190
Total	576,609	59,511	517,098	517,098
		1945–46.		
	£	£	£	£
New South Wales	130,000	11,000	119,000	119,000
Victoria	132,481	17,300	115,181	115,181
Queensland	57,000	8,000	49,000	49,000
South Australia	87,832	10,402	77,430	77,430
Western Australia	46,170	..	46,170	46,170
Tasmania	6,630	330	6,300	6,300
Total	460,113	47,032	413,081	413,081

(a) No deduction has been made for depreciation and maintenance.

(ii) *States* 1936–37 *to* 1945–46. In the following table the net value of bee products and the net value per head of population are shown by States for the years 1936–37 to 1945–46 :—

NET VALUE OF BEE PRODUCTS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			NET VALUE.(a)				
	£	£	£	£	£	£	£
1936–37	43,000	45,360	5,000	28,053	19,803	2,740	143,956
1937–38	51,000	59,930	5,000	20,645	18,850	5,180	160,605
1938–39	43,000	23,448	15,000	27,857	10,591	2,770	122,666
1939–40	42,000	62,838	14,000	31,698	11,976	3,710	166,222
1940–41	102,000	92,010	19,000	72,693	19,251	4,030	308,984
1941–42	146,000	132,956	19,500	75,698	31,445	2,380	407,979
1942–43	40,000	130,408	9,750	110,787	30,000	2,380	323,325
1943–44	196,000	72,864	29,250	72,906	19,281	3,140	393,441
1944–45	228,000	121,124	28,000	112,604	24,180	3,190	517,098
1945–46	119,000	115,181	49,000	77,430	46,170	6,300	413,081

(a) No deduction has been made for depreciation and maintenance.

NET VALUE OF BEE PRODUCTS—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	NET VALUE PER HEAD OF MEAN POPULATION (*a*)						
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1936–37	0 4	0 6	0 1	0 11	0 10	0 3	0 5
1937–38	0 5	0 8	0 1	0 8	0 10	0 5	0 6
1938–39	0 4	0 3	0 3	0 11	0 5	0 3	0 4
1939–40	0 4	0 8	0 3	1 1	0 6	0 2	0 6
1940–41	0 9	1 0	0 4	2 5	0 10	0 4	0 10
1941–42 . ..	1 0	1 4	0 5	2 6	1 4	0 3	1 2
1942–43	0 4	1 3	0 2	3 7	1 3	0 2	0 11
1943–44	1 4	0 9	0 7	2 4	0 10	0 3	1 1
1944–45 . ..	1 7	1 3	0 7	3 7	1 0	0 3	1 5
1945–46	0 10	1 2	0 11	2 6	1 11	0 6	1 1

(*a*) No deduction has been made for depreciation and maintenance.

4. **Oversea Trade in Bee Products.**—Prior to the 1939–45 War the production of honey exceeded Australian requirements and a small quantity was available for export. As a result of increased production, exports have risen considerably since 1938–39, when a quantity of 687,000 lb. of honey, valued at £13,957, was shipped. In 1946–47 the record quantity of 13.9 million lb., valued at £556,605, was exported.

The wider use of frame hives has reduced the production of wax, and as a result the quantity imported generally exceeds that exported.

Particulars of the oversea trade in honey and bees-wax are shown in the following table for the four years ended 1946–47 in comparison with 1938–39.

HONEY AND BEES-WAX : OVERSEA TRADE.

Australian Currency Values.

Particulars.		1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
		HONEY.				
Imports.. ..	lb.	197,223	..	..	..	378
	£	5,120	..	..	..	23
Exports.. ..	lb.	687,007	1,743,302	6,048,894	7,547,977	13,928,488
	£	13,957	81,499	258,614	292,880	556,605
Net Exports ..	lb.	489,784	1,743,302	6,048,894	7,547,977	13,928,110
	£	8,837	81,499	258,614	292,880	556,582
		BEES-WAX.				
Imports.. ..	lb.	70,745	6,506	58,298	319,501	5,320
	£	5,868	1,918	8,331	37,438	1,305
Exports.. ..	lb.	5,565	..	56	5,025	36,805
	£	148	..	7	905	6,107
Net Imports ..	lb.	65,180	6,506	58,242	314,476	−31,545
	£	5,720	1,918	8,324	36,533	− 4,802

NOTE.—The minus sign (−) signifies net exports.

§ 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during each of the four years ended 1946–47 are shown below in comparison with 1938–39.

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS : EXPORTS.

Particulars.	Unit of Quantity.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
		QUANTITY.				
Bees-wax	lb.	5,565	..	56	5,025	36,865
Butter	,,	229,542,779	104,226,518	93,739,086	137,611,340	133,642,282
Cheese	,,	35,923,630	32,974,752	33,513,794	32,766,241	53,555,276
Eggs not in shell ..	,,	650,152	3,894,242	2,833,677	17,689,631	29,803,117
Eggs in shell	doz.	10,144,344	361,885	520,910	7,291,224	17,493,879
Feathers, undressed ..	..	(a)	(a)	(a)	(a)	(a)
Honey	lb.	687,007	1,743,302	6,048,894	7,547,977	13,928,488
Lard(b)	,,	5,490,959	2,752,038	5,433,516	680,922	184,412
Meats—						
Bacon and ham(c) ..	,,	1,739,053	14,954,984	11,045,954	18,856,610	14,674,450
Frozen poultry ..	pr.	21,768	44,825	44,663	283,107	957,724
Frozen pork	lb.	30,716,417	16,017,199	39,881,804	30,772,905	18,705,329
Milk and Cream—						
Condensed, Concentrated, etc.	,,	13,326,367	29,597,184	32,369,362	49,528,033	83,737,092
Dried or powdered ..	,,	5,777,552	9,651,497	14,501,745	9,092,849	17,292,763
Pigs, live	No.	61	43	380	55	623
Poultry, live	,,	2,189	8,900	7,352	16,562	115,798
		VALUE.				
		£A.	£A.	£A.	£A.	£A.
Bees-wax		148	..	7	905	6,107
Butter		12,891,837	6,870,852	8,249,506	12,271,662	12,569,922
Cheese		1,073,931	1,953,958	1,975,113	1,688,700	2,643,355
Eggs not in shell		23,014	343,941	391,410	1,452,066	3,097,208
Eggs in shell		638,159	32,552	51,551	638,014	1,416,549
Feathers, undressed		307	4,292	5,111	1,487	8,304
Honey		13,957	81,499	258,614	292,880	556,605
Lard(b)		67,744	61,671	164,147	24,870	7,751
Meats—						
Bacon and ham(c)		119,994	1,172,784	905,545	1,700,266	1,404,610
Frozen poultry		19,017	36,077	43,771	208,635	872,257
Frozen pork		882,117	587,321	1,436,706	1,204,846	843,935
Milk and Cream—						
Condensed, Concentrated, etc. ..		425,033	957,210	1,103,190	1,707,510	3,211,961
Dried or powdered		365,978	490,488	677,107	448,462	898,835
Pigs, live..		371	419	1,802	555	3,975
Poultry, live		970	7,970	6,766	10,745	7,308
Total		16,523,477	12,601,034	15,270,349	21,651,603	27,548,682

(a) Quantity not available. (b) For years 1938–39, 1943–44 and 1944–45 includes Lard Oil and Refined Animal Fats. (c) Excludes tinned bacon for year 1938–39.

§ 8. British Imports of Dairy and Farmyard Products.

1. **Summary, Principal Products.**—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939 and 1943 to 1946.

DAIRY PRODUCTS : IMPORTS INTO UNITED KINGDOM.

Products.		1939.	1943.	1944.	1945.	1946.
Butter	cwt.	8,736,967	3,032,189	3,064,012	3,802,403	4,226,681
	£	48,424,422	20,808,422	21,189,281	31,705,834	37,347,317
Cheese	cwt.	2,845,425	4,139,869	5,038,357	3,824,872	4,072,955
	£	8,868,544	19,789,163	23,483,764	19,439,734	26,208,693
Milk, powdered and preserved	cwt.	1,698.896	4,366,999	3,522,467	1,907,034	2,562,662
	£	2,817,760	10,077,498	8,928.052	5,770,977	10,330,591
Bacon and ham	cwt.	7,953,486	7,734,273	8,144,157	4,978,400	3 638,254
	£	37,104,629	46,939,641	47,661,187	29,039,461	24,154,908
Pork, chilled or frozen ..	cwt.	988,804	4,320,921	7,299,742	3,850,706	1,597,505
	£	3,036,010	22,252,769	32,505,079	16,180,659	8,830,338
Eggs, dried	cwt.	9,928	1,468,527	1,600,095	701,563	914,665
	£	85,197	30,518,133	33,880,676	16,830,952	30,783,856
Eggs in shell ..	thousand doz.	283,315	22,940	33,537	69,072	81,330
	£	12,834,701	2,586,025	3,663,597	8,075,280	9,286,567

2. **Butter.**—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity in 1946 amounted to 1,309,802 cwt., or 30.99 per cent. of the total importation. The Australian contribution was valued at £10,796,716 and was exceeded only by that received from New Zealand. Substantial imports were also received from Denmark. Australia and New Zealand combined supplied 78.86 per cent. of the total quantity imported during 1946 and Denmark, 20.60 per cent.

In the following table particulars of the imports of butter into the United Kingdom, are shown for the pre-war year 1938 and the post-war year 1946 according to country of origin.

BUTTER : IMPORTS INTO UNITED KINGDOM.

Country from which Imported.	1938.		1946.	
	Quantity.	Value.	Quantity.	Value.
	Cwt.	£ stg.	Cwt.	£ stg.
New Zealand	2,592,251	14,524,140	2,023,240	16,777,303
Australia	1,797,811	9,629,939	1,309,802	10,796,716
Canada	30,017	158,343	49	408
Eire	326,604	1,914,837	2	11
Other British Countries	66,083	381,545	62	352
Argentine Republic..	89,876	407,678	22,046	226,295
Denmark	2,364,799	12,960,434	870,739	9,541,911
Netherlands	711,910	3,465,835	..	..
Other Foreign Countries	1,538,562	7,430,382	741	4,321
Total	9,517,913	50,873,133	4,226,681	37,347,317

(ii) *London Prices.* Fluctuations in prices in London during the years 1938–39 and 1939–40 are shown in the following table. Until September, 1939, the prices quoted represent the mean of the top prices quoted weekly for choicest salted Australian butter together with their f.o.b. equivalents in Sydney and Melbourne in terms of Australian currency. Since September, 1939, the price represents that fixed in accordance with the contract between the Governments of Australia and the United Kingdom for choicest Australian butter. Pence have been omitted throughout.

AVERAGE PRICE PER CWT. OF AUSTRALIAN CHOICEST BUTTER IN LONDON (WITH F.O.B. EQUIVALENTS IN AUSTRALIAN CURRENCY).

Month.	1938–39.		1939–40.		Year.	London.	Australia.
	London.	Australia.(a)	London.	Australia.			
	Shillings (Stg.)	Shillings (Aust.)	Shillings (Stg.)	Shillings (Aust.)		Shillings (Stg.)	Shillings (Aust.)
						(c)	(b)
July ..	120	135	114	(a) 127	1940–41 ..	110	137
August ..	118	132	110	(a) 123	1941–42 ..	110	137
September ..	116	130	120	(a) 135	1942–43 ..	114	143
October ..	111	124	(c) 110	(b) 137	1943–44 ..	114	143
November ..	104	115	(c) 110	(b) 137	1944–45 ..	148	185
December ..	107	119	(c) 110	(b) 137	1945–46 ..	148	185
January ..	120	134	(c) 110	(b) 137	1946–47 ..	173	217
February ..	118	132	(c) 110	(b) 137	1947–48 ..	203	254
March ..	115	128	(c) 110	(b) 137			
April ..	113	126	(c) 110	(b) 137			
May ..	107	119	(c) 110	(b) 137			
June ..	113	126	(c) 110	(b) 137			

(a) Sydney and Melbourne. (b) Equivalent of contract price. (c) Contract price f.o.b. Australian ports. Equivalent under pre-war conditions would be 122s. stg. covering the period 1939 to 1942, 126s. stg. during 1942 to 1944, 161s. stg. during the contract period 1944 to 1946, 185s. stg. during 1946–47 and 215s. stg. during 1947–48.

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1946 was £26,208,693, of which £9,131,328 was received from the United States of America, £8,536,988 from New Zealand and £5,848,531 from Canada. Imports from Australia during 1946 were valued at £1,901,641.

4. **Bacon and Ham.**—Of a total import in 1946 of bacon and ham valued at £24,154,908, Canada supplied £16,742,282, Denmark, £5,612,714 and United States of America, £944,742. Small shipments from other countries amounted to £855,170. Exports of bacon and hams from Australia to the United Kingdom were prohibited during this period.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and chilled) was £8,830,338 in 1946. Imports from Australia amounted to £1,476,373 only. The principal supplies were obtained from Argentine Republic, £3,484,280, United States of America, £2,891,125 and New Zealand, £910,416.

6. **Eggs.**—In 1946 the value of eggs imported into the United Kingdom was £40,070,423, comprising eggs in shell, £9,286,567 and dried eggs, £30,783,856. The Australian share in this trade amounted to £1,816,936. Eggs in shell were supplied by Canada, £4,476,224 and Eire, £2,646,563. The principal exporters of dried eggs to the United Kingdom were the United States of America, £25,017,459, Canada, £2,788,274 and Argentine Republic, £1,596,355.

7. **Milk Products.**—In 1946 the value of powdered and preserved milk imported into the United Kingdom was £10,330,591, comprising condensed milk, sweetened, £410,145, condensed milk, unsweetened, £6,038,217 and powdered milk, £3.882,229. The imports of Australian origin were of a minor nature and amounted to £156,823 only. United States of America supplied the major portion of the imports (£8,016,838) with Canada the next largest exporter (£801,297).

8. **Other Products.**—The imports into the United Kingdom from Australia of bees-wax poultry, game, lard, honey and frozen rabbits in 1946 were unimportant.

CHAPTER XXII.

FORESTRY.*

§ 1. General.

1. **Objects of Forestry.**—Forestry is a profession based on science, art, economic and business principles, which aims to protect and treat forests as restorable resources to provide their maximum direct and indirect benefits to a country.

The direct benefits lie in the providing of essential commodities such as structural timber, poles, piles, sleepers, pulpwood, firewood, tans, oils, resins, etc.; the provision of an avenue for the healthful employment of labour in the rural forestry and sawmilling industry as well as in the transport of timber by rail, road, and water, and in numerous industries directly dependent on forest produce as a raw material. The history of all countries shows that these direct benefits are never fully appreciated until they are seriously reduced following reckless exploitation and absence of conservation measures.

The indirect benefits include regulation of stream flow from catchment areas, for a forest cover provides ideal conditions for the maximum penetration into the soil of rainfall and other precipitations which then become available for the perennial flow of streams. As a result, surface run-off after heavy rain is reduced and therefore floods are minimized in number and severity and as a corollary the ill effects of reduced and/or intermittent flow of streams in the non-rainy season are minimized. Consequent on their action in reducing surface run off in the rainy season, forests have very marked effect in minimizing the ravages of water erosion. The presence of forests in drier wind swept areas also lessens the ill effects of æolian or wind erosion. As with the direct benefits, the indirect benefits of forests unfortunately are seldom appreciated until disastrous floods, siltation of rivers and reservoirs, washing away or blowing away of the topsoil, landslides, tearing of gullies out of hillsides and deposition of stones, rocks and other debris on fertile lands following the destruction of forests, becomes a matter of public concern.

Australia has a particular interest in water and soil conservation for several reasons. The area suitable for agricultural and pastoral development is not so large that material reduction in extent or deterioration of productive capacity cannot but limit expansion and retard development; the topographical soil and climatic conditions of many parts of Australia render them potentially highly susceptible to water and wind erosion; to ensure successful cropping of very large areas of land in Australia, millions of pounds have been spent on water conservation and irrigation schemes but in the last analysis these water conservation schemes are dependent upon regular stream flow and the minimum of siltation.

Forestry aims to protect existing forests from the ravages of fire, insect, fungus and destructive agencies generally; to improve the quality and condition of forests by carrying out judicious fellings; to control exploitation so that the forest increment and not the forest capital is removed; to regenerate cut over areas; to afforest with native or exotic species denuded lands, or those which for protection or other reasons are from a national point of view better under forest than under any other crop.

2. **General Account of Forests and Timbers.**—Compared with Australia's land area of approximately three million square miles, the area of forest land capable of producing commercial timber has always been very small, occupying in the main the wetter belts of the coastal areas and the near coastal highlands. In the early days of settlement the forests, however, appeared to the small population to be practically inexhaustible. In those early days timbers were exploited chiefly on account of their accessibility, ease of working and general utility regardless of their intrinsic merits, and so it was that what are now regarded as superlative furniture and cabinet timbers were often put to quite inferior

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* A specially contributed article dealing with Forestry in Australia appeared as part of this chapter in Official Year Book No. 19 (*see* pp. 701–12 therein). *See* also "The Commonwealth Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1928 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australia.

uses. Clearing of forest land by axe and fire stick to make room for crops and pastures has bitten deeply into the original forest estate which has been further degraded by recurrent forest fires. In retrospect, the damage and waste of the past is appalling, but it marked a phase of forest and timber loss which has been paralleled in the vigorous pioneering activity of the early history of many countries.

Predominantly the forests of Australia consist of relatively coarse bluish green foliaged evergreen hardwoods. The characteristic genus is Eucalyptus, embracing five to six hundred species, which with few exceptions are endemic to Australia. The genus includes such species as the white mountain ash (*E. regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, both of which for height and grandeur have few equals in the world. At the other end of the scale of size of species of this genus are dwarf types, including the small multiple stemmed species collectively known as the " mallees ", which thrive in some of the drier belts. Probably not more than 80 to 90 of the eucalypts are used for sawmilling in Australia and, for one reason or another, not more than 30 to 40 are extensively exploited.

Among these outstanding eucalypts are—

Blackbutt (*E. pilularis*) of New South Wales and Queensland ;
Tallowwood (*E. microcorys*) of New South Wales and Queensland ;
Spotted Gum (*E. maculata*) of New South Wales and Queensland ;
Ironbarks (*E. spp.*) of New South Wales, Victoria and Queensland ;
Alpine Ash (*E. gigantea*) of New South Wales, Victoria and Tasmania ;
Redgum (*E. camaldulensis*) of New South Wales, Victoria and South Australia ;
Mountain Ash (*E. regnans*) of Victoria and Tasmania ;
Messmate, Stringybark or Tasmanian Oak (*E. Obliqua*) of New South Wales, Victoria and Tasmania ;
Jarrah (*E. marginata*) of Western Australia ;
Karri (*E. diversicolor*) of Western Australia.

The range and properties of eucalypt timbers are very great indeed. They fulfil all Australia's requirements where strength and durability are required, for example in such uses as railway sleepers, poles, piles, beams, girders, telegraph crossarms, waggon scantlings, posts, house blocks, wheelwright timber as well as for fuel, etc. In large measure they also meet general building requirements and, to a lesser extent perhaps, export packaging requirements. In recent years certain of the eucalypts have been extensively pulped for paper-making and, less widely, for the manufacture of hardboard.

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture cabinet and veneer timbers are red cedar (*Cedrela toona Var. Australis*), Queensland maple (*Flindersia brayleyana*), Southern and Northern silky oak (*Grevillea robusta* and *Cardwellia sublimis*, respectively), Queensland walnut (*Endiandra palmerstoni*), blackwood (*Acacia melanoxylon*), rose mahogany (*Dysoxylum fraseranum*), etc. Turpentine (*Syncarpia laurifolia*) ranks with the world's best as a harbour piling timber and swamp box (*Tristania suaveolens*) is almost as good. Coachwood (*Ceratopetalum apetalum*) came into prominence for rifle furniture and for aircraft ply during the last war. The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

Indigenous softwood resources have never been large and are now seriously depleted. A remnant only remains of the forests of hoop pine (*Araucaria cunninghamii*), bunya pine (*Araucaria bidwilli*) of New South Wales and Queensland, kauri (*Agathis spp.*) of Queensland, and huon pine (*Dacrydium franklinii*), celerytop pine (*Phyllocladus rhomboidalis*) and King William pine (*Athrotaxis selaginoides*) of Tasmania.

There are still considerable areas of the slow-growing but useful white ant resisting cypress (*Callitris spp.*) in the forests of the inland areas of Queensland, New South Wales and Victoria, but many of them are being overcut and in some localities regeneration of the forests presents difficulties.

The savannah forests of the interior yield minor products such as sandalwood and tan barks, and the leaves of some of the mallees are used for oil distillation.

3. **Extent of Forests.**—According to data submitted by State Forestry authorities for the Empire Forestry Conference in 1947, the total area of forest is 119,402 square miles, or about 4 per cent. of the total land area of Australia. This forest area is distributed between the different States as follows :—

	Square miles.
New South Wales and Australian Capital Territory ..	19,364
Victoria	27,025
Queensland	27,050
South Australia	(a)5,909
Western Australia	27,154
Tasmania	12,900
Total	119,402

(a) Excludes 4,600 square miles of mallee containing firewood only.

The South Australian authorities especially emphasize that, after excluding the mallee firewood areas, the percentage of the remaining forest comparable with even mediocre forest land in other States is so small as to be almost negligible. Apart from this specific case it seems clear that there is considerable variation in the standards adopted for the definition of forest land. Also it should be emphasized that the figures given are stated to be rough estimates only. Furthermore, it is generally agreed that the figures for forest areas given are often far in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considering these facts the percentage of Australia carrying commercial forests is very low. On the other hand it should be noted that approximately 68 per cent. of the area of the continent is practically uninhabited and carries less than one person in every eight square miles.

The table below shows a classification of the estimated total forest area referred to above :—

CLASSIFICATION OF FOREST AREA : AUSTRALIA.

(In square miles).

Class of Forest.	State Forest.	Communal Forest.	Private Forest.	Total.	
				Square Miles.	Percentage of Total Forest Area.
Exploitable—					
Softwood	3,858	16	1,832	5,706	4.8
Mixed wood	1,033	..	94	1,127	0.9
Hardwood	32,016	780	13,146	45,942	38.4
Total	36,907	796	15,072	52,775	44.1
Potentially Exploitable—					
Softwood	200	..	278	478	0.4
Mixed wood	100	..	..	100	0.1
Hardwood	16,853	141	7,848	24,842	20.9
Total	17,153	141	8,126	25,420	21.4
Other Land Classed as Forest	34,798	..	6,409	41,207	34.5
Grand Total	88,858	937	29,607	119,402	..
Percentage of Total Forest Area	74.3	0.8	24.9	..	100.0

The bulk of the softwood forest areas of approximately 4,000 square miles are in Queensland and New South Wales. The softwood forest areas given for these States represent natural forest, a large proportion of which consists of slow growing native cypress (*Callitris spp.*) in low rainfall areas, and the per acre volume of which is comparatively low.

4. **Forest Reservations.**—The rate at which the original forest estate was being diminished had exercised the minds of far-sighted individuals as long ago as the eighties of last century and it was about that time that the first large forest reservations were made. Over the years recognition that forest reservations were inadequate became more general. It was not, however, until an Interstate Forestry Conference was held at Hobart in 1920 that a specific target to be aimed at was mentioned. The figure then agreed upon was an area of 24½ million acres of indigenous forest, which it was considered should be permanently reserved to meet the future requirements of Australia.

The forest reservations in Australia at 30th June, 1946 totalled 25,895,893 acres of which 19,042,219 acres are described as Dedicated State Forests and 6,853,674 acres as Timber and Fuel Reserves. The distribution of these areas is shown by States in § 4. 2 hereafter.

In general the timber and fuel reserves are temporary only and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species, some only of which are at present of commercial value: a good proportion consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also the indigenous forest does not contain adequate supplies of softwoods producing commercial timbers of which our needs have to be largely met by softwood timber imported from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved; in particular the yield capacity per acre, future per capita consumption of different classes of timber, and the future population. It would appear, however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive, if provisional, estimate of forest resources.

5. **Plantations.**—The inadequacy of indigenous softwood supplies has been referred to. This fact has long been recognized by the various forest authorities and considerable progress has been made in experimental planting of exotic conifers and also some substantial progress made in the establishment of commercial plantations. It was natural that this aspect of forestry received earliest attention in South Australia as it is the State most poorly endowed with natural forest and it now has the largest plantation area. For some years South Australia has been exploiting considerable quantities of timber from its plantations and these quantities will increase very substantially during the next decade.

According to statements provided by State authorities, the total effective area of plantations in Australia as at the 30th June, 1946 was 249,379 acres. Details by States are given under § 4. 3.

§ 2. Forestry Activities of the Commonwealth.

1. **General.**—When the Commonwealth of Australia was established on the 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914–18 War these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained a substantial forest resource. In the early twenties of this century a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.

2. **Commonwealth Forestry Bureau.**—In 1925 the Commonwealth Forestry Bureau was instituted and the Commonwealth Forestry Adviser became the Inspector-General of Forests. At this stage it was considered that the most useful contribution that the Commonwealth could make to Australian forestry was: (*a*) to provide better facilities than then existed for the higher training in forestry for recruits to the professional ranks of the State services and for forestry research workers; and (*b*) to initiate research into problems connected with silviculture, forest management and forest protection, which fundamentally were common to most, if not all of the States.

By deciding to build, equip and staff the Australian Forestry School on its own Territory the Commonwealth Government ended a long standing controversy as to the site of a National School which successive Interstate Forestry Conferences had unanimously resolved was necessary. All States sent students to the Australian Forestry School when its career commenced in Adelaide in 1926, pending completion of the school in Canberra in the following year. At this time also a nucleus of selected and qualified officers was sent abroad to undergo special courses of instruction and to obtain experience for the purpose of staffing the research side of the Bureau, which received statutory powers by an Act passed in 1930. These powers and functions subject to the regulations and the direction of the Minister, were as follows:—(*a*) advising the Administrations of the Territories on all matters pertaining to the management of forests; (*b*) the management of forests placed under its control by the Governor-General; (*c*) the establishment of experimental stations for the study of silviculture, forest management and forest protection; (*d*) the provision of educational facilities for the training of professional foresters; (*e*) the establishment and awarding of forestry scholarships; (*f*) the collection and distribution of forestry information; (*g*) the publication of reports and bulletins dealing with forestry; and (*h*) such other functions as are prescribed.

The financial situation in the years immediately following delayed development on the research side, but some progress was being made, including the establishment of experimental stations in South Australia and Tasmania on a co-operative basis with the services of those States. Plans were upset and progress retarded as a result of the 1939–45 War.

3. **Wartime Control of Timber.**—Because of its importance to the war effort of Australia, the supply of timber immediately on the outbreak of war in 1939 came under the control of the Commonwealth Department of Munitions. With the increasing importance of timber as a raw material in the production of munitions and for defence, a Controller of Timber was appointed in April, 1941 to plan and co-ordinate the supply of timber. Under an order of 8th October, 1941, the Controller of Timber was given power to prohibit the cutting of timber, to determine the priority of orders and to collect returns from persons dealing with timber.

On 23rd March, 1942, these powers were extended by the National Security (Timber Control) Regulations to cover all phases in the production, treatment and use of timber. From time to time orders were issued restricting the use of certain timbers.

4. **Forestry and Timber Bureau.**—At the end of the war, the direction of timber supplies within the boundaries of each State became the responsibility of the respective State Governments. By the Forestry and Timber Bureau Act 1946 the title of the Bureau was altered from Forestry Bureau to Forestry and Timber Bureau and its administration was placed under the charge of a Director-General in lieu of an Inspector-General of Forests.

The powers and functions of the Bureau were extended to embrace the following :—(*a*) Collecting statistics and information regarding timber supplies and requirements in Australia, and formulating programmes in respect of the supply, production and distribution of timber in Australia, and the importation into, and exportation from, Australia of timber ; (*b*) advising the Government of the Commonwealth or any instrumentality of that Government, or, when so requested, the Government of any State, or any instrumentality of the Government of any State, or any body or person, on matters relating to the supply, production and distribution of timber in Australia, and the importation into, and exportation from, Australia of timber ; and (*c*) carrying out investigations and research relating to the supply, production, distribution and use of timber.

5. **The Australian Forestry School.**—The genesis of the Australian Forestry School situated in Canberra in the Australian Capital Territory, which was established by the Commonwealth Government primarily to meet the demand of the States for an institution which would give professional training at least equal to that given by the recognized Forestry Schools abroad, has been referred to in (2) above.

Under the Forestry Bureau Act 1944, which came into operation on 3rd May, 1944, a Board of Higher Forestry Education has been established to maintain the standard of the diploma course at the school and to advise as to pre-requisite university courses.

Under existing arrangements the head of the State forestry service may nominate candidates for enrolment at the school. According to the system in vogue in each State, the nomination may be made either at school-leaving age or after the candidate has successfully completed the specified university course. In the first case, the youth is helped throughout his university career and is given employment in practical work during the long vacations to test his suitability as a forestry officer ; in the second case he is chosen later, and the practical tests are not made until the long vacation immediately preceding his entry to the school. The Commonwealth Government also awards to selected students ten scholarships each year of the value of £150 per year for the four years of academic study required. The possession of a nomination by a State Government Service or the receipt of a Commonwealth Government scholarship is not, however, essential to enrolment, since any candidate possessing the necessary qualifications will be accepted for the diploma course, and in special cases applicants desirous of studying a particular branch of forestry will be required to follow certain lectures only. Refresher or post-graduate courses are arranged to meet the needs of senior foresters.

A candidate for enrolment in the diploma course must possess—(*a*) a degree of a university ; or (*b*) a certificate that he has completed the special two years' preliminary course at a university.

The qualifications for enrolment may be waived to assist an applicant of exceptional ability with a record of long service in a State Forestry Department, who has been specially recommended by the head of that service. Such applicants must show proof of education equal to that required for a school leaving certificate.

The course of instruction extends over three years, the first two of which are spent at the school, and the third in one of the forestry services of Australia.

The Commonwealth diploma of forestry is awarded to students on the following conditions :—(*a*) successful completion of theoretical course ; (*b*) satisfactory field work during the course ; and (*c*) one year's satisfactory practical forestry work following the school course.

Students who have passed the approved two-year preliminary science course at the Universities of Adelaide, Melbourne, Western Australia, Queensland, Sydney or Tasmania and two years of Diploma course at the School, may be granted the degree B.Sc.F. by their Universities, subject to certain conditions laid down, particulars of which may be obtained from the Registrar of the University concerned.

For various reasons the number of students attending the School each year almost since its inception has been well below the number which events have since shown were necessary to meet the demand for trained personnel. This position was naturally aggravated during the six years of war, while demands for timber and the need for expansion in all phases of forest developmental work, better protection, transport and more intensive management, have accentuated the shortage of trained staffs. The attendance at the Australian Forestry School has consequently increased substantially and large numbers of ex-servicemen are taking the University science courses which are a necessary pre-requisite to entry to the Forestry School.

Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Council for Scientific and Industrial Research. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Division.

§ 3. Forest Congresses.

Reference to the various forestry conferences held in Australia and elsewhere is given in Official Year Book No. 22, page 742. The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia, 1928 and South Africa, 1935, but the Fifth Conference which was to have been held in India in 1940 was postponed because of the war. The Fifth Conference was eventually held in London in 1947, at which statements were presented on a more uniform basis than formerly by the various forest authorities of the British Commonwealth of Nations. These statements included references to the part played by forestry in the different parts of the Empire in the war effort. Publications issued in connexion with these conferences are available on application to the various State and Commonwealth forestry authorities.

The first session of the Food and Agriculture Organization of the United Nations held at Quebec in 1945 drew attention to the need for statistics on forest resources and the supply of, and demand for, forest products; sound forest policies; sound forest management; afforestation; forest research; forest education; integration of forest industries and avoidance of waste; and forest products research, particularly in the direction of extending utilization to little known woods.

At the second Session held at Copenhagen in 1946, the Director-General of the Forestry and Timber Bureau attended the conference as alternate delegate and adviser in forestry matters for the Commonwealth.

§ 4. State Forestry Departments.

1. **Functions.**—With the exception of Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State there is a department or commission to control forestry work. The functions of these administrations are as follows :—(*a*) The securing of an adequate reservation of

forest lands; (*b*) the introduction of proper measures for scientific control and management of forest lands; (*c*) the protection of forests; (*d*) the conversion, marketing and economic utilization of forest produce; and (*e*) the establishment and maintenance of coniferous forests to remedy existing deficiency in softwoods.

In Queensland, forestry is a sub-department of the Department of Public Lands.

Annual reports are issued by each State forest authority: that for Queensland being included with the report issued by the Department of Public Lands.

In Victoria a forestry school has been established at which recruits are trained for the forestry service of the State.

2. **Forest Reservations.**—As mentioned in § 1. 4 *ante*, State forest authorities agreed that, in order to secure Australia's future requirements, an area of 24½ million acres should be permanently reserved. In June, 1946 the area of State forests reserved in perpetuity totalled 19,042,219 acres or 78 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate.

The Forestry Departments also control 6,853,674 acres recorded as temporary timber and fuel reserves, but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table details of forest areas as recorded by State Forest Authorities, distinguishing between Dedicated State Forests and Timber and Fuel Reserves, are given for each State as at 30th June, 1946.

AREA OF FOREST RESERVATIONS, 30th JUNE, 1946.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State Forests ..	5,258,146	4,904,364	3,402,926	(*a*)249,687	3,395,586	1,831,510	19,042,219
Timber and Fuel Reserves ..	1,295,948	(*b*)	3,041,170	..	2,138,412	(*c*) 378,144	*d* 6,853,674
Total ..	6,554,094	4,904,364	6,444,096	249,687	5,533,998	2,209,654	25,895,893

(*a*) Includes Timber and Fuel Reserves. (*b*) Not available. (*c*) Excludes Fuel Reserves. (*d*) Incomplete.

3. **Reforestation, Afforestation, etc.**—In the table below details are given of the area of indigenous forest improved or regenerated, the area of forest plantations and the number of persons employed by Forestry Departments for the year 1945–46.

FORESTRY : AREAS, AND NUMBERS EMPLOYED BY FORESTRY DEPARTMENTS, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Total area of indigenous forest improved or regenerated .. acres	1,442,300	1,058,458	436,280	9,928	527,077	(*a*)	3,474,043
Total area of effective plantations							
Hardwoods .. .. acres	421	2,592	2,713	2,232	17,065	173	25,196
Softwoods .. .. "	29,163	47,004	29,777	103,212	12,892	2,135	224,183
Number of persons employed in Forestry Departments—							
Office staff .. .. No.	(*b*) 272	185	151	54	51	55	768
Field staff .. .. "	176	(*c*) 279	1,161	456	(*d*) 338	81	2,491

(*a*) Not available. (*b*) Includes Wood Technology staff totalling 56. (*c*) Includes professional staff totalling 129. (*d*) Includes 236 casual hands.

4. **Revenue and Expenditure.**—The revenue and expenditure of State Forestry Departments for the years 1938–39 and 1942–43 to 1945–46 are shown below.

With the exception of Queensland and South Australia, expenditure in all States has exceeded the amount of revenue received since 1942–43. Since that year South Australia has recorded an excess of income over expenditure which is indicative of the successful development of the afforestation policy adopted in a State which is less endowed in natural forest resources than any of the other States.

STATE FORESTRY DEPARTMENTS: REVENUE AND EXPENDITURE.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
			REVENUE.		
	£	£	£	£	£
New South Wales ..	224,266	467,942	530,820	572,316	525,594
Victoria..	198,157	630,018	838,729	817,036	883,376
Queensland	764,557	927,982	1,094,325	1,155,425	914,824
South Australia	101,312	291,403	319,300	336,934	359,861
Western Australia ..	145,724	190,238	227,350	265,034	244,408
Tasmania	32,765	50,418	48,524	55,043	57,417
Total	1,466,781	2,558,001	3,059,048	3,201,788	2,985,480
			EXPENDITURE.		
	£	£	£	£	£
New South Wales ..	250,355	517,621	598,969	590,280	595,400
Victoria(*a*)	406,175	1,088,020	1,306,750	1,416,800	1,310,882
Queensland	764,545	691,691	845,572	857,368	904,860
South Australia	182,633	238,791	308,372	312,181	324,198
Western Australia(*b*) ..	164,943	176,857	262,000	286,813	262,342
Tasmania	71,437	60,263	59,062	66,975	135,000
Total	1,840,088	2,773,243	3,380,725	3,530,417	3,532,682

(*a*) Includes expenditure from Relief Works, 1938–39, £167,611; 1942–43, £72. (*b*) Includes expenditure from General Loan and Trust Funds, 1938–39, £136,254; 1942-43, £98,908; 1943–44, £124,894; 1944–45, £115,423; 1945–46, £111,317.

§ 5. Forestry Production.

1. **Timber.**—(i) *Production.* Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown by States in the following table for the year 1945–46. The information published in the corresponding table of previous issues was restricted to establishments classified as Forest Sawmills. In order not to omit the output of other mills not included under this classification, the table has been amended to include all mills as described above.

OUTPUT OF NATIVE TIMBER : ALL MILLS, 1945-46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOGS TREATED, INCLUDING THOSE SAWN ON COMMISSION.							
	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.
Hardwood ..	269,049	313,886	124,468	9.244	261,036	163.036	1,140,719
Softwood.. ..	110,497	32,887	165,022	50,248	3,823	10,684	373,161
Total ..	379,546	346,773	289,490	59,492	264,859	173,720	1,513,880
SAWN TIMBER PRODUCED FROM LOGS ABOVE.							
	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.
Hardwood ..	180,025	190,663	77,493	5.609	105.987	89,130	648.907
Softwood.. ..	72,083	21,948	112,419	31,504	1,660	6,263	245,877
Total ..	252,108	212,611	189,912	37,113	107,647	95,393	894,784

The next table shows the sawn output of native timber in sawmills and other woodworking establishments in each State for the years 1938–39 and 1942–43 to 1945–46.

SAWN OUTPUT OF NATIVE TIMBER : ALL MILLS.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.
New South Wales ..	179,350	250,018	259,035	245,975	252,108
Victoria..	120,197	182,045	176,464	173,619	212,611
Queensland	193,250	199,398	204,201	194,138	189,912
South Australia	14,537	35,194	35,684	38,418	37,113
Western Australia ..	125,453	109,377	109,987	106,029	107,647
Tasmania	84,228	93,381	81,888	83,775	95,393
Total	717,015	869,413	867,259	841,954	894,784

In addition to the sawn timber shown in the table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, mines, etc., as well as of the quantities produced by other agencies, but the figures have not been included in the preceding two tables. The quantities so produced in Western Australia in the five years shown in the preceding table were as follows :—1938–39, 35,862,540 sup. feet; 1942–43, 19,498,536 sup. feet; 1943–44, 11,698,704 sup. feet; 1944–45, 10,216,392 sup. feet; and 1945–46, 10,348,458 sup. feet. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under departmental control, but owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of hewn timber produced from privately owned land, but information regarding output is not available.

(ii) *Stocks.* Particulars are given below of timber stocks held on 30th June, 1946, as reported by mills and other factories included in the woodworking group. These latter establishments include box and case factories and joinery works, etc. It is not known whether the particulars shown are complete.

STOCKS OF TIMBER REPORTED BY FACTORIES, 30th JUNE, 1946.

State.	Logs.			Sawn Timber.		
	Hardwood.	Softwood.	Total.	Hardwood.	Softwood.	Total.
	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.	'000 sup. feet.
New South Wales ..	12,312	6,214	18,526	12,730	21,186	33,916
Victoria	20,700	2,419	23,119	31,765	10,376	42,141
Queensland.. ..	10,081	4,534	14,615	3,604	6,681	10,285
South Australia ..	137	1,647	1,784	4,282	7,569	11,851
Western Australia ..	3,253	159	3,412	30,214	260	30,474
Tasmania	2,435	89	2,524	18,370	2,152	20,522
Total ..	48,918	15,062	63,980	100,965	48,224	149,189

2. **Paper and Wood Pulp.**—(i) *Tasmania.* The manufacture of paper from Australian-grown timber has been established in three States. In Tasmania two large mills are making paper from indigenous hardwoods. The first of these started production of paper from imported pulp at Burnie in August, 1938, and so continued until the pulp mill, using local hardwood, came into operation a few months later. At this mill, pulp is produced by the soda process and the caustic soda necessary for cooking the wood and chlorine for bleaching the pulp are produced by a separate plant located alongside the mill. Two paper-machines are operated. The larger machine has the capacity to produce paper 180 inches wide at 800 feet per minute, while the smaller machine is capable of producing paper 90 inches wide at about 400 feet per minute. The paper produced covers a wide range of high class printing, writing, drawing, duplicating and blotting papers. At Boyer on the Derwent River, near Hobart, production of newsprint commenced in February, 1941. The newsprint is manufactured from local ground wood pulp to which is added a small proportion of sulphite pulp imported from Canada. The paper-making machine installed is capable of making paper 161 inches wide at the rate of 1,200 feet per minute, and when running at full capacity can produce about 540 tons of newsprint per week. At both these mills logs are taken from the forests by means of tractors and transported to the mills by rail. Power is supplied by the Tasmanian Hydro-electric Commission and hardwood not suitable for pulping is used as fuel. During 1945–46, 51,590 cords of pulp wood and 38,293 cords of firewood were delivered to these mills.

(ii) *Victoria.* In Victoria the production of wood pulp for paper-making commenced in January, 1937, with a pilot plant having the capacity of about 3,000 tons of air dried pulp per annum. In October, 1939 the main plant at Maryvale, with a capacity of 27,000 tons of pulp per annum, commenced operations. Associated with the pulp mill is a paper-making plant capable of producing about 20,000 tons of kraft paper per annum. The timber used at this mill consists mainly of hardwoods at present unsuitable for other purposes. In addition, a small quantity of pine, mainly thinnings, mill waste and special softwood for production of cellulose is used. During 1945–46 the wood taken from Crown Lands for the production of wood pulp and cellulose amounted to 1,812,293 cubic feet of which 1,744,176 cubic feet were hardwoods and 68,117 cubic feet were radiata pine.

(iii) *South Australia.* In South Australia a pulp and paper board mill commenced operations during 1941–42 near Millicent. When completed and in full production the mill will use considerable quantities of softwoods from the Mount Burr and Penola pine plantations. During 1945–46, 5,253,961 super. feet of pulp wood were produced of which 4,682,719 super. feet were supplied to the pulp mill and 571,242 super. feet for the production of cellulose.

3. **Other Forest Products.**—(i) *Veneers, Plywood, Etc.* Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. Recently, however, this has been considerably extended in all States, and much greater use has been made of local-grown timbers, both hard and softwoods. In recent years special attention has been paid to the selection of logs suitable for peeling. In 1945–46 the quantity of plywood produced amounted to 106,856,615 square feet ($\frac{3}{16}''$ basis) and veneers to 38,132,562 square feet ($\frac{3}{16}''$ basis).

(ii) *Charcoal.* With the availability of additional petrol supplies towards the end of the 1939–45 War, the production of charcoal, which previously had a wide use as a substitute fuel during the war years, was considerably reduced and is now little higher than normal.

(iii) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1938–39 to £86,714 ; in 1942–43 to £94,050 ; in 1943–44 to £124,148 ; in 1944–45 to £136,297 ; and in 1945–46 to £201,948. The bulk of the product is shipped to the United Kingdom and the United States of America with Victoria as the principal exporting State. Large quantities of the crude oil are used locally in flotation processes in connexion with the recovery of gold and other minerals.

(iv) *Sandalwood and Sandalwood Oil.* Most of the sandalwood is produced in Western Australia where considerable quantities are gathered each year for export to Asiatic countries. Small quantities are also produced in South Australia, Queensland and New South Wales. Details of exports of sandalwood are shown in paragraph 3 (ii), § 7. Oil distilled from Western Australian sandalwood has a medicinal value and is used extensively in the manufacture of perfumes. Quantities of this oil are exported annually to the Eastern States of Australia and oversea countries, principally the United Kingdom. Oversea exports of Australian sandalwood oil amounted in 1938–39 to £13,964 ; in 1942–43 to £2,834 ; in 1943–44 to £34 ; in 1944–45 to £11,390 ; and in 1945–46 to £19,560.

(v) *Grass Tree or Yacca Gum.* South Australia is the chief State producing this gum, which is used in the preparation of varnishes and lacquers. Quantities are also obtained in New South Wales and Western Australia but these are small. The production in South Australia during 1945–46 amounted to 991 tons, whilst the exports from Australia amounted to 832 tons valued at £10,659

(vi) *Tan Barks.* The forests of Australia are capable of yielding a wealth of tanning materials ; many species of eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Although many of these species contain higher percentages of tannin than are found in the barks of oak, chestnut and hemlock, formerly the chief source of tannin material in the northern hemisphere, scattered distribution has resulted in the richest tan-bearing species only being used in Australia. These are :—golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), and mallet (*Eucalyptus astringens*).

Up to 1913 the production of wattle bark was more than sufficient for local requirements, and an export trade was built up. The supply diminished during the six years ended 1926–27, and Australia imported on the average about 2,000 tons each year from Natal, where the plantations were originally started from Australian seed. From 1927–28 to 1938–39 exports exceeded imports in every year except 1936–37, but since 1939–40 there has been a considerable excess of imports. The chief exporting States are Western Australia, South Australia and Tasmania. This matter is referred to in tables appearing in § 7 following. The other valuable tan bark, mallet (*Eucalyptus astringens*) of Western Australia, is not extensively used in Australian tanneries, but it is exported to Europe and other countries, where it is used for producing a tannin extract. A brief account of work done by the Council for Scientific and Industrial Research in connexion with tanning materials is given in Official Year Book No. 22, p. 743. The production of extract from the bark of karri (*Eucalyptus diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kino impregnated marri (*Eucalyptis calophylla*) bark is not yet complete. The production of tan bark in Australia approximated 25,000 tons per annum in the years prior to 1939. Since then production has declined and in 1945–46 reached the level of about 8,800 tons. It is noted, however, that this diminution is offset by the increased use of vegetable tanning extract which rose from 3,686 tons in 1938–39 to 12,015 tons in 1945–46.

4. **Value of Production—Gross and Net.**—(i) *General.* The values of forestry production on a gross, local and net basis are shown in the following table for the years 1944–45 and 1945–46.

GROSS, LOCAL AND NET VALUE OF FORESTRY PRODUCTION.

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of Other Materials Used in Process of Production.	Net Value of Production.(*a*)
			1944–45.		
	£	£	£	£	£
New South Wales ..	3,438,000	117,000	3,321,000	..	3,321,000
Victoria	2,884,556	319,292	2,565,264	393,423	2,171,841
Queensland.. ..	2,936,000	420,000	2,516,000	..	2,516,000
South Australia ..	1,144,008	74,820	1,069,188	..	1,069,188
Western Australia ..	1,575,877	210,503	1,365,374	414	1,364,960
Tasmania	874,820	58,590	816,230	..	816,230
Total ..	12,853,261	1,200,205	11,653,056	393,837	11,259,219
			1945–46.		
	£	£	£	£	£
New South Wales ..	3,877,000	132,000	3,745,000	..	3,745,000
Victoria	3,127,887	301,658	2,826,229	415,000	2,411,229
Queensland.. ..	2,922,000	420,000	2,502,000	..	2,502,000
South Australia ..	1,246,105	75,707	1,170,398	..	1,170,398
Western Australia ..	1,678,763	219,835	1,458,928	155	1,458,773
Tasmania	1,010,640	37,540	973,100	..	973,100
Total ..	13,862,395	1,186,740	12,675,655	415,155	12,260,500

(*a*) No deduction has been made for depreciation and maintenance.

(ii) *States*, 1936–37 *to* 1945–46. In the following table the net value of forestry production and the net value per head of population are given by States for the years 1936–37 to 1945–46.

NET VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
				NET VALUE.(*a*)			
	£	£	£	£	£	£	£
1936–37	2,096,000	731,777	2,186,000	570,692	1,314,152	407,300	7,305,921
1937–38	2,179,000	1,029,174	2,514,000	570,199	1,272,707	431,200	7,996,280
1938–39	2,261,000	1,067,732	2,362,000	542,465	1,147,335	399,500	7,780,032
1939–40	2,347,000	1,108,864	2,531,000	605,419	1,087,734	452,520	8,132,537
1940–41	2,576,000	1,355,402	2,734,000	693,162	1,322,138	516,000	9,196,702
1941–42	3,159,000	1,594,643	2,423,000	879,332	1,272,606	722,100	10,050,681
1942–43	3,155,000	1,858,326	2,328,000	1,011,491	1,422,782	813,040	10,589,539
1943–44	3,285,000	1,952,278	2,822,000	1,028,671	1,372,336	764,010	11,224,295
1944–45	3,321,000	2,171,841	2,516,000	1,069,188	1,364,960	816,230	11,259,219
1945–46	3,745,000	2,411,229	2,502,000	1,170,398	1,458,773	973,100	12,260,500
			NET VALUE PER HEAD OF MEAN POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1936–37	0 15 8	0 7 11	2 4 5	0 19 5	2 18 2	1 15 1	1 1 5
1937–38	0 16 1	0 11 1	2 10 6	0 19 4	2 15 8	1 16 8	1 3 4
1938–39	0 16 7	0 11 5	2 6 11	0 18 3	2 9 7	1 13 9	1 2 6
1939–40	0 17 0	0 11 9	2 9 10	1 0 3	2 6 5	1 17 10	1 3 3
1940–41	0 18 6	0 14 1	2 13 0	1 3 1	2 15 11	2 3 0	1 6 1
1941–42	1 2 7	0 16 5	2 6 7	1 9 0	2 13 6	3 0 2	1 8 2
1942–43	1 2 4	0 18 10	2 4 10	1 13 0	2 19 4	3 7 6	1 9 5
1943–44	1 3 1	0 19 7	2 13 5	1 13 5	2 17 0	3 2 9	1 10 11
1944–45	1 3 1	1 1 7	2 7 0	1 14 2	2 16 0	3 6 4	1 10 9
1945–46	1 5 9	1 3 11	2 6 1	1 17 0	2 19 4	3 18 0	1 13 1

(*a*) No deduction has been made for depreciation and maintenance.

5. **Employment.**—(i) *Forestry Operations.* The estimated number of persons engaged in forestry operations as at June, 1946 is shown in the following table. These estimates, which have been based upon pay-roll tax and other data, include working proprietors but exclude those engaged in the sawmilling industry whose particulars are given in the next table.

ESTIMATED NUMBERS ENGAGED IN FORESTRY, JUNE, 1946.

(Excluding Sawmilling Industry).

Sex.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust. (*b*)	W. Aust.	Tasmania.	Total.
	No.	No.	No.	No.	No.	No.	No.
Males	6,809	6,142	4,763	1,260	1,446	1,593	22,013
Females	20	11	6	34	13	8	92
Total ..	6,829	6,153	4,769	1,294	1,459	1,601	22,105

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

(ii) *Milling Operations.* Details of the number engaged, including working proprietors, in the milling operations of sawmills are given in the next table. Further details regarding the operations of these mills are given in Chapter XXIV.— "Manufacturing Industry".

SAWMILLS: NUMBER ENGAGED, 1945–46.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	No.	No.	No.	No.	No.	No.	No.
Males	6,062	4,388	4,651	1,316	2,118	1,762	20,297
Females	215	105	158	96	15	27	616
Total ..	6,277	4,493	4,809	1,412	2,133	1,789	20,913

§. 6. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important Australian timbers are many and varied, and are indicated in previous issues of the Official Year Book. (*See* Official Year Book No. 6, pp. 454–6 and Official Year Book No. 10, Section III., §§ 7 and 8).

A list of Australian timbers best known on the local markets appeared in Official Year Book No. 20, p. 713.

2. **Nomenclature of Australian Timbers.**—The vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers, whilst in other cases the same name may apply to different timbers. This naturally leads to a good deal of confusion and the difficult problem of providing a solution was referred by the timber trade to The Standards Association of Australia which prepared and published lists showing for each of the most important commercial timbers in Australia, the standard trade common names and their appropriate associated names. The adoption of the standard trade common names recommended by the Association would eliminate confusion and materially assist all those engaged in the production, marketing and use of timber in Australia.

§ 7. Oversea Trade.

1. **Imports.**—(i) *Dressed Timber.* The quantities and values of timber imported into Australia during the years 1938–39 and 1944–45 to 1946–47 inclusive are shown in the following table according to countries of origin :—

DRESSED TIMBER: IMPORTS INTO AUSTRALIA.

Country of Origin.	Quantity.				Australian Currency Values.			
	1938–39.	1944–45.	1945–46.	1946–47.	1938–39.	1944–45.	1945–46.	1946–47.
	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	£A.	£A.	£A.	£A.
United Kingdom ..	1	..	..	..	48	..	1	126
Canada	8,927	5,353	7,950	2,037	99,797	107,380	217,197	72.078
New Zealand	..	150	555	312	..	7,425	25,836	15,861
Other British Countries ..	3	19	..	1	23	172	..	41
Norway	4,209	..	..	44	47.570	..	..	1,215
Sweden	1,978	..	..	1,534	26.687	..	..	61,045
U.S. of America	2,242	722	2,179	1,153	24,203	69,028	81,686	67,299
Other Foreign Countries ..	418	..	..	..	6,771	..	..	..
Total	17,778	6,244	10,684	5,081	205,099	184,005	324,720	217,665

The figures in the table above exclude items such as architraves, veneers, plywood, staves, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £A.138,208 in 1946–47.

Prior to the 1939–45 War the bulk of the imports of dressed timber came from Canada, Norway, Sweden and the United States of America; but after the outbreak of the war increased quantities were imported from New Zealand. Practically the whole of this timber consisted of softwoods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

(ii) *Undressed Timber.* Australian imports of undressed timber for the years 1938–39 and 1944–45 to 1946–47 are shown hereunder:—

UNDRESSED TIMBER (*a*): IMPORTS INTO AUSTRALIA.

Country of Origin.	Quantity.				Australian Currency Values.			
	1938–39.	1944–45.	1945–46.	1946–47.	1938–39.	1944–45.	1945–46.	1946–47.
	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	£A.	£A.	£A.	£A.
United Kingdom ..	115	47	209	199	10,969	4,151	12,536	20,075
Canada	296,948	61,876	70,171	87,853	1,225,650	763,061	884,813	2,537,499
Malaya (British) ..	165	..	..	41	1,389	..	..	2,101
New Zealand	11,193	3,235	5,037	7,199	173,556	63,294	135,058	170,072
Other British Countries ..	10,840	1,603	1,097	3,269	75,136	14,335	10,611	72,473
Japan	374	..	..	..	8,439	..	..	..
Netherlands East Indies ..	20	..	..	..	130	..	..	..
New Caledonia	1,671	..	..	..	6,368	..	..	226
Philippine Islands ..	6,879	..	3	..	72,921	..	39	..
Sweden	4,654	..	..	1,014	40,592	..	..	36,468
United States of America ..	12,245	19,192	26,814	22,348	210,092	317,015	474,670	525,515
Other Foreign Countries ..	2,994	36	81	3	29,694	1,797	1,107	2,735
Total	348,098	85,989	103,412	121,926	1,854,936	1,163,653	1,518,834	3,367,164

(*a*) Excludes timber not measured in super. feet.

By far the larger proportion of the undressed timber imports consists of softwood such as oregon, redwood, hemlock, western red cedar and yellow pine from Canada and the United States of America; and kauri, rimu and white pine from New Zealand. Amongst the hardwoods imported the principal are oak from the United States of America and furniture woods from the Pacific Islands.

2. **Exports.**—(i) *Undressed Timber (excluding Railway Sleepers).* The quantity and value of undressed timber, exclusive of railway sleepers, exported during the years 1938–39 and 1944–45 to 1946–47 are shown below, together with the countries of destination.

UNDRESSED TIMBER (EXCLUDING RAILWAY SLEEPERS) (*a*): EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity.				Value.			
	1938–39.	1944–45.	1945–46.	1946–47.	1938–39.	1944–45.	1945–46.	1946–47.
	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	'000 sup. ft.	£A.	£A.	£A.	£A.
United Kingdom ..	11,750	3,200	4,287	6,362	137,927	90,280	130,841	198,275
Canada	223	278	336	296	4,723	7,836	9,541	10,066
Hong Kong	98	..	214	467	1,058	..	6,974	15,971
Mauritius	354	..	99	371	4,520	..	2,609	10,148
New Zealand	17,145	3,694	5,384	7,152	245,194	103,523	139,159	186,430
Pacific Islands—								
Fiji	838	465	231	757	15,570	12,255	6,209	22,810
Gilbert and Ellice Islands Colony	63	4	166	74	1,076	130	20,313	2,472
Other Islands ..	736	6	94	1,008	12,825	148	28,350	19,460
Union of South Africa ..	7,164	1,753	1,393	1,951	80,668	39,073	36,056	55,387
Other British Countries ..	643	2	275	206	6,862	44	29,210	8,036
Belgium	1,286	..	..	352	19,347	..	..	12,657
United States of America ..	867	94	56	390	26,506	3,265	1,947	14,409
Other Foreign Countries ..	2,630	220	136	210	32,470	7,862	4,482	3,572
Australian Produce ..	43,797	9,716	12,671	19,596	588,746	264,416	415,691	559,693
Other Produce	541	11	27	583	6,079	413	951	10,725
Total	44,338	9,727	12,698	20,179	594,825	264,829	416,642	570,418

(*a*) Excludes timber not measured in super. feet.

The bulk of the exports of undressed timber were consigned to New Zealand, the United Kingdom, South Africa and the United States of America, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. Considerable quantities of pole, pile and girder timber are also exported from New South Wales to New Zealand.

(ii) *Railway Sleepers.* Particulars of the quantities and values of railway sleepers exported, which are excluded from the previous table relating to undressed timber, are shown below.

RAILWAY SLEEPERS : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity.				Value.			
	1938–39.	1944–45.	1945–46.	1946–47.	1938–39.	1944–45.	1945–46.	1946–47.
	'ooo sup. ft.	'ooo sup. ft.	'ooo sup. ft.	'ooo sup. ft.	£A.	£A.	£A.	£A.
United Kingdom ..	1,438	..	497	194	14,467	..	14,034	4,683
Ceylon	5,334	..	540	..	53,339	..	12,902	..
Hong Kong	..	..	43	29	..	..	934	544
Mauritius	563	..	..	645	6,216	..	..	17,876
New Zealand	16,896	1,967	6,791	4,231	165,303	31,617	117,325	76,642
Pacific Islands (British) ..	201	102	138	180	2,341	1,694	2,440	3,160
Union of South Africa ..	4,941	539	841	614	49,412	13,377	23,975	16,725
Other British Countries ..	..	..	135	2,104	..	..	2,749	95,162
Egypt	4,198	4	..	..	41,986	176	..	..
Iran (Persia)	271	..	..	..	2,707	..	..	..
Iraq	165	..	..	..	1,696	..	..	..
Other Foreign Countries ..	29	122	98	342	291	1,482	1,096	5,606
Total	34,036	2,734	9,083	8,339	337,758	48,346	175,455	220,398
Number of Sleepers 'ooo	1,268	117	363	332	..	..	..	..

3. **Classification of Imports and Exports.**—(i) *General.* The quantities of timber, according to items, imported and exported during the year 1946–47 are shown in the following table :—

TIMBER : ITEMS IMPORTED AND EXPORTED FROM AUSTRALIA, QUANTITIES, 1946–47.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed	Sup. ft.	5,081,109	311,610	4,769,499
Undressed—				
Railway Sleepers	,,	(a)	8,339,197	93,407,780
Other	,,	121,925,952	20,178,975	
Architraves, mouldings, etc. ..	Lin. ft.	..	91,758	— 91,758
Plywood, veneered or otherwise ..	Sq. ft.	14,326	31,111	— 16,785
Palings	,,	..	..	..
Shingles	,,	100	3,766	— 3,666
Staves—				
Dressed, etc.	No.	12,401	150	12,251
Undressed	,,	..	..	..
Laths..	,,	37,500	165,150	— 127,650
Wood pulp	Ton	33,238	(a)	..
Veneers	Sq. ft.	8,652,238	1,200	8,651,038

(a) Not recorded separately.

NOTE.—The minus sign (—) denotes an excess of exports.

Similar particulars of the values of imports and exports during the year 1946–47 are shown hereunder :—

TIMBER : ITEMS IMPORTED AND EXPORTED FROM AUSTRALIA, VALUES, 1946–47.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£A.	£A.	£A.
Dressed	217,665	7,160	210,505
Undressed—			
Railway Sleepers	(a)	220,398	2,576,348
Other	3,367,164	570,418	
Architraves, mouldings, etc.	..	1,081	— 1,081
Plywood, veneered or otherwise	77	1,108	— 1,031
Palings	..		
Shingles	1	1,389	— 1,388
Staves—			
Dressed, etc.	1,390	34	1,356
Undressed	.		
Laths	25	331	— 306
Doors	3	1,096	— 1,093
Wood pulp	978,048	(a)	..
Veneers	132,836	55	132,781
Spokes, rims, felloes, etc.	46	5,458	— 5,412
Other	513,353	427,370	85,983
Total	5,210,608	(b)1,235,898	(b)3,974,710

(a) Not recorded separately. (b) Exports of wood pulp not included.

NOTE.—The minus sign (—) denotes an excess of exports.

(ii) *Sandalwood.* A considerable quantity of sandalwood is exported, principally from Western Australia, to Hong Hong and China, where it is highly prized and largely used for artistic and ceremonial purposes. Particulars for the four years 1943–44 to 1946–47 are compared with 1938–39 in the following table :—

SANDALWOOD : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity.					Value.				
	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
	Tons.	Tons.	Tons.	Tons.	Tons.	£A.	£A.	£A.	£A.	£A.
Hong Kong	806	..	..	45	676	18,709	..	..	2,250	66,083
India	25	..	..	..	25	842	..	..	..	1,500
Malaya (British)	97	..	..	85	70	3,149	..	..	4,750	12,200
Other British Countries	17	..	..	13	25	545	..	..	584	2,730
China	686	..	..	..	325	18,511	..	..	..	27,741
Other Foreign Countries	17	..	..	..	..	574	..	..	..	13
Total	1,648	..	..	143	1,121	42,330	..	..	7,584	110,267

(iii) *Tan Bark.* Tan bark appears both as an export and an import in the Australian trade returns. The following table refers to exports for the three years ended 1946–47, compared with 1938–39.

TAN BARK : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity.				Value.			
	1938–39.	1944–45.	1945–46.	1946–47.	1938–39.	1944–45.	1945–46.	1946–47.
	Cwt.	Cwt.	Cwt.	Cwt.	£A.	£A.	£A.	£A.
India	..	..	..	7,981	..	..	..	11,706
New Zealand	7,620	..	1	..	3,897	..	6	..
Other British Countries ..	40	..	..	522	27	..	..	768
Germany	8,251	..	..	..	3,582	..	..	..
Other Foreign Countries..	2,309	..	..	1,170	1,124	..	..	558
Total	18,220	..	1	9,673	8,630	..	6	13,032

(*a*) There were no exports for the years 1942–43 to 1944–45.

For a number of years prior to 1927–28 Australia had to import large quantities of tanning bark, but thereafter imports dropped to negligible quantities and exports rose annually to 89,061 cwt. in 1931–32. Since 1931–32 there has been a diminution of exports and by 1941–42 these had reached the low level of 421 cwt. The quantity imported did not rise appreciably until 1939–40 when imports were more than three times that of the previous year. Since that year there has been a considerable excess of imports; the Union of South Africa being almost the sole source of supply.

A comparison of the imports and exports of tan bark during 1938–39 and the four years ended 1946–47 is given in the following table :—

TAN BARK : IMPORTS AND EXPORTS, AUSTRALIA.

Particulars.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
QUANTITIES—	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Imports	6,199	105,315	90,024	86,367	65,056
Exports	18,220	..	..	1	9,673
Excess of imports over exports	− 12,021	105,315	90,024	86,366	55,383
VALUES—	£A.	£A.	£A.	£A.	£A.
Imports	2,547	67,075	59,955	62,601	54,335
Exports	8,630	..	..	6	13,032
Excess of imports over exports	− 6,083	67,075	59,955	62,595	41,303

NOTE.—The minus sign (−) denotes an excess of exports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle *Acacia mollissima* is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in the Union of South Africa :—(*a*) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions; and (*b*) the availability of native labour.

(iv) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are imported annually into Australia. The total value in Australian currency of the importations in 1946–47 was £336,045, and was composed as follows :—Tanners' Bates, £2,704; wattle bark extract, £289,098; quebracho extract, £9; other extract, £9,924; and volonia, myrobalans, cutch, etc., £34,310.

Exports of tanning extracts from Australia amounted to £58,084 in 1946–47.

CHAPTER XXIII.

FISHERIES.

§ 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

At certain times of the year whales of various species appear off our coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(*a*) the reefs from which cod and other tropical species are taken in tropical waters, and snapper in temperate waters; and (*b*) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark's Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from off Crowdy Head to south of Cape Everard and further off the east Tasmanian coast off Babel Island southwards to Storm Bay. Other demersal grounds are known to exist in the Great Australian Bight but as yet are not exploited. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Horse mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Concentrations of other pelagic groups, including tuna and clupeoid species, are reported over the continental shelf at various points.

The pearl oyster inhabits the northern and western coastal waters from Cape York to Shark Bay. Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland but the principal cultivation grounds are found in New South Wales. The scallop is found commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia.

The whale appearances occur off the south of the continent, extending as far north as southern Queensland in the east and to beyond Shark's Bay in the west.

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery is worked with traps, hand lines and other long lines. The demersal flathead-fishery

is worked by both otter trawl (with V.–D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types; while the pelagic barracouta fishery employs principally barbless jigs. Large nets, chiefly of the purse seine type, for pelagic fisheries have been tested experimentally by the Council for Scientific and Industrial Research in its exploratory work.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, while the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries at present are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restriction on fishing by prohibitions against fishing at certain times and places and by certain methods. In some States the quantity, type and construction of gear is subject to limitations and legal minimum sizes are prescribed.

In October, 1946 the Commonwealth Government appointed a Director of Fisheries and established a Commonwealth Fisheries Office in the Department of Commerce and Agriculture to co-ordinate fisheries administration. This office took over the responsibilities of the Controller of Fisheries who operated in the Ministry of Post-war Reconstruction.

Special legislation exists for the pearl-shell and bêche-de-mer fisheries and for whaling.

§ 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government, as a consequence of the results obtained from the exploratory work of the Federal Investigation ship *Endeavour*. The State enterprise failed, but the fishery was found very profitable by private enterprise, which had as many as sixteen steam trawlers operating at one time. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, being given an exceptional opportunity by the requisitioning of the steam trawlers by the Navy. Subsequently, practically all the Danish seine vessels were also requisitioned. Since the war, vessels requisitioned by the Services have returned to this fishery, and in 1946 licences were issued to 13 steam trawlers and 120 Danish seine vessels. Many of these vessels made very satisfactory catches when they first entered the industry, but by the end of 1946 signs of serious depletion of fish stocks had appeared. It seems that the catch should be limited to from 10 to 12 million lb. per annum to ensure economic production.

In about 1929–30 Queensland fishermen turned their attention to Spanish mackerel, and this fishery rapidly developed, with Townsville as principal centre. Production of this fishery rose to about 1 million lb. in 1942, but catches since that year have been considerably lower.

At about the same time (1930) a fishery for snapper shark in southern waters began to expand. This fishery rapidly extended its area of operations and the catch increased from 23,131 lb. in 1930 to 3,150,000 lb. in 1942–43. Greater impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. The catch of shark in south-east Australia has been stabilized at about three million pounds. Livers have been used for the production of about 15,000 gallons of vitamin oil, and the flesh is sold for the most part in Melbourne Fish Market.

The presence of stocks of tuna of various species in Australian waters has been established, but despite extensive experiments, no commercial quantities have yet been taken. However, following experimental work by the Council for Scientific and Industrial Research, a Commonwealth crew, operating an American mackerel purse seine net, made two catches of approximately 15 tons each of horse mackerel in Tasmanian waters in 1947. After considerable alterations to the net, experiments were made on the southern New South Wales coast, and three catches of about 20 tons each were made. Further experiments will be made on the Tasmanian coast in the 1948 season, and these results should give useful information for the development of a commercial fishery on this species, which is of particular interest for canning.

(ii) *Production.* Production for the year 1945–46 is considerably higher than for previous years, being about 75 million lb. This is due to the fact that steam trawlers and Danish seine vessels operating on the south-east coast of Australia have made large catches on the grounds that were rested for the period of the war, and also due to the general expansion in the industry following the war when so many of the larger vessels were requisitioned by the Services.

2. **Oysters and Shell Fisheries.**—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. These have not been successful in Queensland, but in New South Wales there has been constant improvement in methods and the present technique in certain areas is highly efficient. Peak production of 44,723 bags was reached in 1938.

Cray fisheries have developed greatly in recent years The catch for 1945–46 was considerably higher than in previous years in Tasmania, South Australia, and Western Australia ; in each of these States it exceeded a million lb.

3. **Pearl-shell and Bêche-de-mer.**—Before the war pearl shelling was carried out in the tropical waters of Queensland, Northern Territory, and Western Australia, mainly by Japanese and Malay divers, using diving apparatus, in waters varying from 4 to 20 fathoms in depth. During the war practically all of these operations were discontinued. After the war the policy of the Commonwealth Government was to prohibit indentured labour, but despite this restriction, by the middle of 1947, there were 24 boats again in commission off the Western Australian coast, operated by 223 men, of whom about 70 per cent. were Asiatics. In North Queensland, pearling operations are centred at Thursday Island, where, by June, 1947, 19 boats were being operated by Europeans, with 169 men, of whom 65 per cent. were Torres Straits Islanders. In addition, Island owners were operating 20 luggers and 20 cutters. Because of the warmer water the Thursday Island divers dispense with the heavy diving dress and boots used by divers in the Broome area, and use only a helmet and corselet.

§ 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers, consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at 15 centres along the coast. The organization ensures that all fish is marketed through the correct channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this State have proved most successful. In New South Wales the central market in Sydney

is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute the fish to local centres and to inland country districts, and send any balance of fish they may have to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate movement of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939–45 War, Australians consumed annually the equivalent of about 145 million lb. of round fish, or 20.7 lb. per person. About 65 million lb. was produced locally and the remainder was imported; that is, the average Australian ate about 9.3 lb. of Australian fish a year and the equivalent of 11.4 lb. of overseas fish. The per capita consumption in the United Kingdom in 1937 was 49.8 lb., in New Zealand 23.8 lb. and in Japan 110 lb. During the 1939–45 War, however, the quantity of fish entering civilian consumption in Australia was reduced to approximately 4 lb. per person annually owing to the decline in local production, the steep drop in the imports of canned fish and the allocation of supplies for the Services and other priority needs.

Although during the period of meat rationing fish was in increased demand, it is not, as in many countries, a staple item in the diet of Australia, and is still regarded rather as a luxury.

3. **Processing, including Canning.**—The equipment for handling fish has in the past been rather inadequate, but in most States since the war cold storage facilities have been improved and increased. In Queensland, and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish.

In all States there has been a development of facilities for light processing of fish, particularly for smoking.

There are six canneries operating in Tasmania, two in New South Wales, three in Western Australia and one in South Australia. The output from these for 1946–47 was 6,356,000 lb., and it is estimated that these figures will be doubled in 1947–48. The whole of this production is absorbed by the home market, and it is estimated that even the doubled production will find ready sale in Australia.

4. **By-Products.**—Processing of offal for fish-meals, etc., has been established in certain States The processing of livers for vitamin rich oils has been undertaken in several States and oil-production has been favourably developed.

§ 4. Inquiries and Research.

1. **General.**—Australian fishing industries have been the subject of numerous inquiries seeking explanation of the very slow rate of development, of the unfortunate conditions prevailing within the industry and of the paucity of supplies available to the public. To meet the situation revealed, various research programmes have been instituted.

2. **Conference 1927–1929.**—With the object of reviewing the potentialities of the fishing industry of Australia the Development and Migration Commission convened a meeting of State and Commonwealth representatives. The Conference, which was held in Melbourne during September, 1927, affirmed :—

(1) The importance of establishing a Marine Biological Institution to study the scientific problems connected with Australian fisheries, and to collect and disseminate authoritative information and give advice on matters concerning the fisheries ;

(2) the desirability of establishing an experimental trawling unit to explore the fisheries resources of Australia.

Committees were formed to deal with important problems concerning the preservation, transportation, marketing and distribution of fish, the canning and curing of fish, the production of fish by-products, the factors of destruction in fisheries, the development of the oyster industry, etc. The reports prepared by these Committees were submitted to a further conference held in July, 1929, at which the Commonwealth and all State Governments were represented; it was then unanimously recommended that investigation work should be undertaken by the Commonwealth Government.

3. **Council for Scientific and Industrial Research, Division of Fisheries.**—Acting on the recommendation of the 1927–1929 Conference, the Commonwealth Government entrusted to the Council for Scientific and Industrial Research the task indicated by the Conference. In its original plans the Council provided a sum of £80,000, spread over a period of five years, for the following purposes :—(i) to procure a vessel specially designed for the exploration of pelagic or surface-swimming fish, but which could also carry out certain investigations of demersal or bottom-dwelling species; (ii) to undertake experiments in the canning of fish and the determination of the chemical composition of fish thought to be suitable for the manufacture of fish by-products; (iii) to determine, by tests, the best methods of curing and preserving fish, especially the more common varieties; and (iv) in co-operation with the State authorities, to undertake a study of the systems of distribution of fish in each State with a view to improving existing transport and marketing facilities. A research vessel constructed at a cost of £17,000 was commissioned in 1938 and a programme of work was laid down extending over a period of five years. During the first three years the investigation was confined to the south-eastern portion of the Australian coast; part of the work was extended later to the south-western portion of the Continent. A modern biological laboratory was established at Port Hacking in New South Wales.

The early work led the Council to place this programme on a permanent basis, and the Division of Fisheries has increased its staff and its work to include (1) an exploratory programme designed to survey new areas and study oceanographical, hydrological and planktological conditions and new fisheries, and (2) a biological programme designed to study the important existing fisheries, both marine and freshwater, shell fisheries, and seaweed resources.

Portions of this programme have already been completed, and much information regarding the pelagic fish (tuna, Australian salmon, horse mackerel or cowanyoung, kingfish, pilchards, anchovies and sprats) has been collected. As a result of this work commercial catches of sprats are now being made in Tasmania, and the Division's purse seine net has been used by a commercial fishing crew to take several catches of horse mackerel in Tasmanian and southern New South Wales waters.

An experimental shipment of the Pacific oyster from Japan is at present under observation in Australian waters to determine whether this oyster could be successfully transplanted to Australia.

Surveys have been made of beds of the seaweed *Gracilaria* and this weed, and other seaweeds, have been used in the experimental production of agar. As a result of these experiments agar is now being produced commercially in sufficient quantities to supply the Australian market.

4. **Tariff Board Inquiry.**—The Tariff Board, after an inquiry held in 1941, concluded that the development of a prosperous fishing industry would be an important contribution to the war effort, that the possibilities of commercial exploitation were established, and that the stage had been reached when additional governmental assistance was desirable. It recommended that assistance to the Council for Scientific and Industrial Research be continued and that a Commonwealth Fisheries Authority be established with the necessary authority to carry out its functions.

5. **War-time Control.**—A conference between representatives of the Council for Scientific and Industrial Research and State Departments administering fisheries was held in October, 1941, for the purpose of inquiring into the constitution of the proposed Commonwealth Authority and other related matters.

No action arose from this Conference. In 1942 the Division of Fisheries, Council for Scientific and Industrial Research, prepared, on behalf of the Director-General of Man-power, a register of man-power in the industry and made suggestions for the rationalization of the industry under war-time conditions. As a result of these suggestions a Controller of Fisheries was appointed to co-ordinate and organize the industry. The programme of the Controller included the setting of production goals, control of the allocation of man-power, fuel and equipment, organization of co-operatives within the industry, rationalization of marketing and distribution and general supervision of development.

6. **Commonwealth Fisheries Authority.**—As a practical outcome of the recommendations of the Tariff Board and negotiations by the Controller of Fisheries, the Commonwealth Government appointed a Director of Fisheries and the staff of the Commonwealth Fisheries Office, which is located in the Department of Commerce and Agriculture. This Fisheries Authority was appointed to administer all fisheries matters which are the concern of the Commonwealth Government, having as special responsibilities the co-ordination of fisheries administration of the States by conference of officials, the administration of legislation concerned with extra-territorial waters, the oversight of development of all commercial fisheries. the designing of a co-ordinated marketing scheme, the extension work for the industry, which was to include publicity through a journal, and also a school for fishermen. The last portion of the programme has been carried out and the "Fisheries Newsletter", with a distribution of 16,000, is despatched to all licensed fishermen in the Commonwealth, and to a large number of overseas fisheries institutions. The Fisheries School for ex-Servicemen under the Commonwealth Reconstruction Training Scheme is the responsibility of this Department for staffing and general administration.

7. **Pearl-shell Fishery Royal Commission.**—In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and it was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the 1914–18 War, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as then conducted.

8. **Pearl-shell Fishery Tariff Board Inquiry.**—Arising out of an application for the payment of a bounty on pearl-shell gathered by fishing vessels registered in Australia, the industry was the subject of an inquiry by the Tariff Board which presented its report in 1935. The Board did not approve the granting of a bounty but recommended some relief to the industry in the form of the remission of primage and customs duty.

9. **North Australia Development Committee.**—In 1946 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl shell with particular reference to the possibility of instituting pearl shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

§ 5. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following tables :—

GENERAL FISHERIES, 1945–46.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust. (*c*)	W.Aust. (*c*)	Tas.	N. Ter.	Australia.
No. of boats engaged ..		1,873	1,194	2,823	1,575	569	560	(*f*)	8,594
Value of boats and equipment ..	£	688,974	372,388	368,115	490,000	143,872	130,000	(*f*)	2,193,349
No. of men engaged ..		(*a*)6,047	2,329	4,955	2,812	(*d*)1,086	1,200	(*f*)	18,429
Total take of—									
Fish ..	cwt.	273,829	106,456	90,800	52,750	39,001	77,462	(*f*)	640,298
	£	951,719	543,719	428,949	241,900	200,208	151,045	(*f*)	2,517,540
Crayfish ..	doz.	7,427	2,313	..	18,365	*e* 27,118	*e* 69,078	(*f*)	124,301
	£	18,485	4,164	..	22,780	16,850	34,815	(*f*)	97,094
Prawns ..	cwt.	11,133	..	1,568	..	45	..	(*f*)	12,746
	£	74,106	..	14,068	..	250	..	(*f*)	88,424
Crabs ..	doz.	29,418	..	17,052	..	(*e*) 4,530	..	(*f*)	51,000
	£	4,257	..	*b* 18,867	..	1,760	..	(*f*)	24,884

(*a*) Fishermen's licences issued. (*b*) Includes £2, the value of 17 turtles. (*c*) Year ended December, 1945. (*d*) Includes 726 full-time operatives. (*e*) Estimated. (*f*) Not available.

Figures for Australia for the years 1938–39 and 1942–43 to 1945–46 are shown in the table below :—

GENERAL FISHERIES : AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
No. of boats engaged		5,462	6,156	6,867	8,086	8,594
Value of boats and equipment	£	649,026	776,434	967,598	1,455,001	2,193,349
No. of men engaged		9,081	10,106	12,400	14,612	18,429
Fish obtained—						
Quantity	cwt.	612,735	467,547	479,971	568,661	640,298
Gross value ..	£	1,385,281	1,920,293	1,929,329	2,168,676	2,517,540
Crustaceans obtained—Gross value	£	134,866	227,775	246,576	213,343	210,402

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. During 1945–46 the available returns show the following takes :—New South Wales, 55,203 cwt., value £193,210 ; Queensland, 6,512 cwt., value £14,131. In Tasmania the scallop is far more important than the oyster. In 1945–46 the scallops taken in Tasmania were valued at £30,750 and oysters at only £630.

Figures for Australia for the years 1938-39 and 1942–43 to 1945–46 are shown in the following table :—

EDIBLE OYSTER FISHERIES : AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Boats engaged ..	No.	754	715	816	861	892
Men engaged	,,	850	728	790	813	883
Oysters obtained—						
Quantity	cwt.	89,145	79,885	50,482	57,489	62,205
Gross value (*a*) ..	£	132,201	171,754	137,698	204,465	238,919

(*a*) Includes scallops in Tasmania, valued at £14,500 in 1938 ; £14,583 in 1942–43 ; £15,428 in 1943–44 ; £16,300 in 1944–45 ; and £30,750 in 1945–46.

(iii) *Pearls, Pearl-shell and Bêche-de-mer—States.* At the outbreak of war in the Pacific in December, 1941, the pearling industry ceased to operate. Operations were resumed in Queensland in 1944–45 but in Western Australia and Northern Territory not until 1946–47. The latest available particulars of equipment used and production are shown in the table following :—

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES.(*a*)

State or Territory.	Number of Boats Engaged.	Value of boats and Equipment.	Number of Men Engaged.	Pearl-shell.		Gross Value of Pearls obtained. (*b*)	Gross Value of Bêche-de-mer obtained.	Gross Value of Tortoise shell obtained.
				Quantity obtained.	Gross Value.			
	No.	£	No.	Tons.	£	£	£	£
1940–41—								
Queensland(*c*) ..	88	95,036	924	1,187	160,335	..	6,890	6
Western Australia(*d*) (*e*)	65	55,981	536	700	73,903	1,584	24	15
Northern Territory(*f*)	9	5,000	80	131	11,434	..	..	..
Total ..	162	156,017	1,540	2,018	245,672	1,584	6,914	21
1941(*g*)—								
Western Australia ..	57	55,398	487	616	96,127	2,360	..	..
1944–45—								
Queensland(*h*) ..	10	9,500	(*j*)123	15	2,738	..	..	..
1945–46—								
Queensland(*i*) ..	150	51,250	(*j*)717	53	31,800	..	..	..

(*a*) No pearl-shell industry in New South Wales, Victoria, South Australia and Tasmania. (*b*) Incomplete ; as returned. (*c*) Also 275 tons of trochus-shell valued at £19,286. (*d*) Year ended December, 1940. (*e*) Also 3 cwt. trochus-shell valued at £10. (*f*) Year 1939–40. (*g*) Queensland and Northern Territory not available for 1941–42. (*h*) Also 122 tons of trochus shell valued at £15,278. (*i*) Also 371 tons of trochus shell valued at £48,795. (*j*) Includes Torres Strait Islanders and other Australian natives.

(iv) *Australia.* A summary of the principal statistics relating to pearl, pearl-shell and bêche-de-mer fisheries is given in the following table for the three years ended 1940–41 and for 1944–45 and 1945–46. Particulars of tortoise shell and trochus shell have been omitted because they are regarded as incomplete.

Details of exports of these items are given in § 6. 3 hereafter.

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES(*a*) : AUSTRALIA.

Particulars.		1938–39.	1939–40.	1940–41.	1944–45. (*c*)	1945–46. (*c*)
Boats engaged ..	No.	181	167	162	10	150
Value of boats and equipment	£	168,133	164,456	156,017	9,500	51,250
Men engaged	No.	1,750	1,408	1,540	123	717
Pearl-shell obtained—						
Quantity	tons	2,543	2,149	2,018	15	53
Value	£	222,281	198,264	245,672	2,738	31,800
Value of—						
Pearls obtained(*b*) ..	£	3,397	2,620	1,584	..	..
Bêche-de-mer obtained	£	8,145	669	6,914	..	..

(*a*) See notes to previous table. (*b*) Incomplete ; as returned. (*c*) Queensland only available.

2. **Value of Production—Gross and Local.**—(i) *General.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in their collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION.

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of other Materials used in process of Production.	Net Value of Production.(*a*)
			1944–45.		
	£	£	£	£	£
New South Wales	1,220,000	197,000	1,023,000	23,000	1,000,000
Victoria..	400,720	61,677	339,043	(*b*)	(*b*)
Queensland	352,000	75,000	277,000	70,000	207,000
South Australia	189,097	25,633	163,464	(*b*)	(*b*)
Western Australia ..	165,109	10,582	154,527	43,575	110,952
Tasmania	277,660	..	277,660	(*b*)	(*b*)
Total (*c*)	2,604,586	369,892	2,234,694	(*b*)	(*b*)
			1945–46.		
New South Wales ..	1,242,000	196,000	1,046,000	25,000	1,021,000
Victoria..	548,081	82,456	465,625	(*b*)	(*b*)
Queensland	557,000	120,000	437,000	110,000	327,000
South Australia	264,680	34,049	230,631	(*b*)	(*b*)
Western Australia ..	219,068	15,614	203,454	62,590	140,864
Tasmania	217,240	..	217,240	(*b*)	(*b*)
Total (*c*)	3,048,069	448,119	2,599,950	(*b*)	(*b*)

(*a*) No deduction has been made for depreciation and maintenance. (*b*) Not available. (*c*) Excludes production in the Northern Territory.

(ii) *States,* 1935–36 *to* 1945–46. In the following table the local value of fisheries production and the local value per head of population are given by States for the years 1935–36 to 1945–46. Local value is gross value less marketing costs and is the value at the place of production. The value of materials used in the course of production is not available for all States and consequently production is valued at that point. These values therefore overstate the net values by the extent of these costs.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE.(*a*)							
	£	£	£	£	£	£	£
1935–36 ..	583,000	146,946	287,000	151,800	179,405	71,040	1,419,191
1936–37 ..	650,000	161,999	336,000	184,669	224,432	80,900	1,638,000
1937–38 ..	548,000	168,095	296,000	209,234	286,580	87,050	1,594,959
1938–39 ..	620,000	176,919	277,000	220,401	269,894	90,350	1,654,564
1939–40 ..	508,000	199,632	285,000	202,009	252,837	109,910	1,557,388
1940–41 ..	517,000	244,444	330,000	227,987	251,529	96,830	1,667,790
1941–42 ..	619,000	387,462	185,000	245,301	226,945	109,570	1,773,278
1942–43 ..	830,000	377,418	242,000	277,014	117,202	86,450	1,930,084
1943–44 ..	728,000	345,756	272,000	240,347	160,088	221,350	1,967,541
1944–45 ..	1,023,000	339,043	277,000	163,464	154,527	277,660	2,234,694
1945–46 ..	1,046,000	465,625	437,000	230,631	203,454	217,240	2,599,950
LOCAL VALUE PER HEAD OF MEAN POPULATION.							
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1935–36 ..	4 5	1 7	5 11	5 2	8 0	6 2	4 3
1836–37 ..	4 9	1 9	6 10	6 3	9 11	7 0	4 10
1937–38 ..	4 0	1 10	5 11	7 1	12 6	7 5	4 8
1938–39 ..	4 6	1 11	5 6	7 5	11 8	7 8	4 9
1939–30 ..	3 8	2 1	5 7	6 9	10 10	9 2	4 5
1940–41 ..	3 9	2 7	6 4	7 7	10 8	8 0	4 9
1941–42 ..	4 5	4 0	3 7	8 1	9 7	9 2	5 0
1942–43 ..	5 11	3 10	4 8	9 0	4 11	7 2	5 4
1943–44 ..	5 1	3 6	5 2	7 9	6 8	18 2	5 5
1944–45 ..	7 1	3 4	5 2	5 3	6 4	22 6	6 1
1945–46 ..	7 2	4 7	8 1	7 3	8 3	17 5	7 0

(*a*) No deduction has been made for depreciation and maintenance.

3. **Fish Preserving.**—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, has continued to operate, and small quantities of fish have been canned from time to time. For particulars of recent developments *see* page 1029.

In 1939 New South Wales and Tasmania were the only producing States, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938–39 and 1942–43 to 1945–46.

PRODUCTION OF CANNED FISH: AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45. (*a*)	1945–46.
Quantity ..	lb.	603,302	1,286,307	533,740	1,038,771	1,683,612
Value	£	13,700	65,912	43,856	102,607	147,016

(*a*) Incomplete.

The varieties canned in the various States differ according to the catch available, but separate details for each variety are not available. In New South Wales salmon is the principal variety, while in South Australia there are more varieties, including mullet, salmon, garfish, etc. In Western Australia herrings, crayfish and mullet are included, and in Tasmania salmon and crayfish.

4. **State Revenue from Fisheries.**—The revenue from fisheries in each State during the year 1945–46 is shown hereunder :—

FISHERIES : REVENUE, 1945–46.

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales ..	6,325	10,560	757	2,026	19,668
Victoria	2,175	68	188	5	2,436
Queensland	6,716	2,328	376	149	9,569
South Australia (*a*) ..	2,841	..	36	2,625	5,502
Western Australia (*a*) ..	1,222	1,315	12	13	2,562
Tasmania	2,278	..	..	4,722	7,000
Northern Territory (*b*) ..	..	..	..	..	..
Total	21,557	14,271	1,369	9,540	46,737

(*a*) Year ended December, 1945. (*b*) Not available.

Similar particulars for Australia for the years 1938–39 and 1942–43 to 1945–46 are given in the following table :—

FISHERIES : REVENUE, AUSTRALIA.

Particulars.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£	£	£	£	£
Licences	15,563	10,587	14,300	17,021	21,557
Leases	12,446	13,217	13,670	12,724	14,271
Fines and Forfeitures ..	1,397	828	1,092	612	1,369
Other Sources	4,867	913	656	861	9,540
Total	34,273	25,545	29,718	31,218	46,737

§ 6. Oversea Trade in Fishery Products.

1. **Imports of Fish.**—The large importations of fish and fish products each year give further evidence of the desirability of developing the fishing industry of Australia. Imports for the years 1942–43 to 1946–47 in comparison with 1938–39 are shown below :—

FISH AND FISH PRODUCTS : IMPORTS INTO AUSTRALIA.

Classification.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
QUANTITY.						
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Fish—						
Fresh or preserved by cold process—						
Oysters in shell ..	635	400	117	..	..	..
Other	83,393	21,162	19,033	22,711	23,268	46,196
Potted or concentrated ..	9,435	..	..	18	112	2,153
Preserved in Tins—						
Fish—						
Herrings	38,917	6,453	40,894	362	9,305	45,373
Pilchards	(*a*)	(*a*)	(*a*)	(*a*)	2,958	63
Salmon	166,695	45,188	36,098	57,423	31,785	10,540
Sardines (including Sild)	29,372	..	12,455	265	1,849	7,780
Other	14,306	43,786	17,196	52,913	6,607	9,942
Shell Fish—						
Crustaceans ..	6,829	150	65	99	260	301
Oysters	1,939	862	581	2	294	4
Other	(*a*)	(*a*)	(*a*)	(*a*)	111	194
Smoked or Dried (not salted)	8,122	..	17	122	400	6,870
N.E.I. (including salted) ..	7,987	1,149	1,339	1,032	3,879	6,309
VALUE IN AUSTRALIAN CURRENCY.						
Fish—	£A.	£A.	£A.	£A.	£A.	£A.
Fresh or preserved by cold process—						
Oysters in Shell ..	704	279	741	4	..	..
Other	273,289	112,801	108,211	135,029	161,932	295,818
Potted or concentrated ..	122,250	1	..	1,010	6,805	42,492
Preserved in Tins—						
Fish—						
Herrings	138,391	4,078	215,119	2,393	78,864	333,190
Pilchards	(*a*)	(*a*)	(*a*)	(*a*)	19,669	6,227
Salmon	716,164	375,290	244,841	416,117	178,718	103,403
Sardines (including Sild)	182,336	1	46,805	4,648	25,728	130,549
Other	63,996	266,884	96,331	381,488	127,977	127,624
Shell Fish—						
Crustaceans ..	70,328	2,303	897	1,552	4,494	4,937
Oysters	13,995	7,832	4,850	23	4,146	19
Other	(*a*)	(*a*)	(*a*)	(*a*)	872	1,961
Smoked or Dried (not salted)	23,603	..	125	803	1,772	44,044
N.E.I. (including salted) ..	10,948	9,669	11,799	9,291	31,917	37,476
Total	1,616,004	779,138	729,719	952,358	642,894	1,127,740

(*a*) Not recorded separately.

Canned fish constituted by far the largest proportion of the imports; salmon from Canada, herrings from Canada and the United Kingdom, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. The potted fish came chiefly from the United Kingdom and New Zealand, which also supplied a considerable proportion of the fresh fish imported in 1946–47; the bulk of the remainder came from the Union of South Africa. The small import of oysters was supplied by New Zealand, which has also furnished the bulk of the crustaceans imported in recent years.

2. **Exports of Fish.**—During 1946–47 the exports of fish of Australian origin were as follows:—oysters in shell, 170 cwt., £1,280; other fresh or preserved by cold process, 2,688 cwt., £41,512; potted or concentrated, 568 cwt., £12,613; fish preserved in tins, 7,889 cwt., £73,175; shell fish in tins, 1,250 cwt., £19,516; smoked or dried, 822 cwt., £7,607 and other fish, 9 cwt., £9,590.

3. **Exports of Pearl and other Shell.**—The exports of pearl, tortoise and trochus-shell of Australian origin are shown hereunder for the years 1938–39 and 1942–43 to 1946–47:—

PEARL, TORTOISE AND TROCHUS-SHELL: EXPORTS FROM AUSTRALIA.

Article.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
Pearl-shell ..	cwt.	52,532	645	51	401	959	5,535
	£	244,266	7,525	489	5,198	16,917	149,975
Tortoise-shell ..	cwt.	4	..	1	..	..	3
	£	151	..	97	469	36	155
Trochus-shell ..	cwt.	9,108	6,779	2,025	3,481	5,466	16,424
	£	34,166	33,558	17,192	23,070	39,280	81,154

CHAPTER XXIV.

MANUFACTURING INDUSTRY.

NOTE.—Working proprietors are included in all cases in the "Number of Persons Engaged".

Single-year tables in this issue relate to the year 1945–46 and in the immediately preceding issue to the year 1943–44. Corresponding tables for 1944–45 may be found in the *Production Bulletin* 1944–45 No. 39, Part I.—Secondary Industries.

§ 1. Number of Factories.

1. **Number of Factories in each State.**—For statistical purposes, a "factory" was defined by the Conference of Statisticians in 1902 as any factory, workshop or mill where four or more persons are employed or power is used. The statistics which follow should be read in the light of this definition. The following table shows the number of factories in each State for the four years 1942–43 to 1945–46 compared with 1938–39 :—

FACTORIES : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938–39 ..	9,464	9,250	3,087	2,067	2,129	944	26,941
1942–43 ..	10,110	8,738	2,641	2,134	1,799	992	26,414
1943–44 ..	10,755	9,317	2,652	2,149	1,807	994	27,674
1944–45 ..	11,359	9,669	2,783	2,182	1,931	1,006	28,930
1945–46 ..	12,287	10,195	2,945	2,395	2,280	1,082	31,184

2. **Number of Factories in Industrial Classes.**—(i) *Australia.* The next table shows the number of factories in Australia during 1938–39 and the years 1942–43 to 1945–46 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930–31, superseded the grouping which had been in use since 1902. The definition of a factory adopted at the Conference of Statisticians in 1902 is, however, still used. Details of some of the principal industries included in the table will be found in § 9 hereinafter.

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
I. Treatment of Non-metalliferous Mine and Quarry Products	564	412	417	458	591
II. Bricks, Pottery, Glass, etc.	471	322	289	318	[illegible]
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	666	770	816	862	886
IV. Industrial Metals, Machines, Implements and Conveyances	7,255	7,306	7,788	8,173	8,810
V. Precious Metals, Jewellery and Plate	290	262	258	267	337
VI. Textiles and Textile Goods	611	785	821	865	883
VII. Skins and Leather	533	529	563	581	651
VIII. Clothing	4,314	4,201	4,462	4,773	5,215
IX. Food, Drink and Tobacco	5,202	5,179	5,457	5,664	5,865
X. Woodworking and Basketware	2,822	2,689	2,799	2,873	3,148
XI. Furniture, Bedding, etc.	1,149	933	917	959	1,140
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	1,816	1,681	1,673	1,688	1,703
XIII. Rubber	299	260	275	286	308
XIV. Musical Instruments	34	35	35	37	41
XV. Miscellaneous Products	413	576	624	650	714
Total, Classes I. to XV.	26,439	25,940	27,194	28,454	30,708
XVI. Heat, Light and Power	502	474	480	476	476
Grand Total	26,941	26,414	27,674	28,930	31,184

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. From 1931–32 to 1940–41 the number of factories increased each year but in the two succeeding years there were decreases. In 1943–44, however, a substantial increase occurred and has continued until 1945–46 when the number of factories in Australia reached the new high level of 31,184.

(ii) *States*, 1945–46. The following table shows the number of factories in each State in 1945–46, classified according to the nature of the industry :—

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1945–46.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-Metalliferous Mine and Quarry Products ..	225	178	42	68	54	24	591
II. Bricks, Pottery, Glass, etc. ..	194	100	32	51	23	10	410
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	445	272	44	65	41	19	886
IV. Industrial Metals, Machines, Implements and Conveyances ..	3,530	2,934	773	661	688	230	8,816
V. Precious Metals, Jewellery and Plate	126	125	22	30	29	5	337
VI. Textiles and Textile Goods ..	290	490	23	38	27	15	883
VII. Skins and Leather	307	216	49	41	28	10	651
VIII. Clothing	2,287	1,933	320	329	283	63	5,215
IX. Food, Drink and Tobacco ..	2,037	1,656	809	592	503	268	5,865
X. Woodworking and Basketware ..	1,188	819	426	183	203	329	3,148
XI. Furniture, Bedding, etc. ..	370	372	114	108	120	56	1,140
XII. Paper, Stationery, Printing, Bookbinding, etc.	686	618	147	115	109	28	1,703
XIII. Rubber	118	92	40	27	18	13	308
XIV. Musical Instruments	16	14	3	7	1	..	41
XV. Miscellaneous Products.. ..	329	268	38	32	40	7	714
Total, Classes I. to XV. ..	12,148	10,087	2,882	2.347	2,167	1,077	30,708
XVI. Heat, Light and Power ..	139	108	63	48	113	5	476
Grand Total ..	12,287	10,195	2,945	2,395	2,280	1,082	31,184

§ 2. Classification of Factories according to Number of Persons Engaged.

1. **General.**—The classification of factories previously in use ended at the group " Over 100 ". This was regarded as too restricted as it did not permit of any analysis of the development of factories in size groups above 100 employees. In consultation with the State Statistical Bureaux, it was agreed to extend, in 1945–46, the classification of factories according to size in the manner shown in the table below in respect of numbers of factories and, in the table which follows, in respect of numbers employed.

Comparative details on the new basis are not available but those on the old basis are continued in par. 3 hereafter.

2. **States, 1945–46.**—The following table shows, for each State, the number of factories classified according to the number of persons engaged in 1945–46 :—

FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1945–46.

Size of Factory (Persons engaged).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	NUMBER OF FACTORIES.						
Under 4	3,536	3,065	753	585	996	334	9,269
4	1,118	785	282	244	120	126	2,675
5 to 10	3,304	2,520	858	707	587	345	8,321
11 to 20	1,803	1,584	469	328	242	128	4,554
21 to 50	1,490	1,286	326	322	218	86	3,728
51 to 100.. ..	518	490	123	108	75	38	1,352
101 to 200 ..	282	247	96	58	32	15	730
201 to 300 ..	85	101	19	19	7	1	232
301 to 400 ..	43	46	3	5	..	3	100
401 to 500 ..	26	22	5	2	1	..	56
501 to 750 ..	41	27	5	8	1	4	86
751 to 1,000 ..	13	10	3	1	..	..	27
Over 1,000 ..	28	12	3	8	1	2	54
Total ..	12,287	10,195	2,945	2,395	2,280	1,082	31,184

The relative importance of large and small factories is illustrated by a classification of the average number of persons engaged according to the size of factory in which they work :—

FACTORIES : CLASSIFICATION OF PERSONS ENGAGED ACCORDING TO SIZE OF FACTORY, 1945–46.

Size of Factory (Persons engaged).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER ENGAGED DURING PERIOD WORKED.							
Under 4	7,302	6,045	1,611	1,259	2,009	756	18,982
4	4,472	3,140	1,128	976	480	504	10,700
5 to 10	22,902	17,633	5,908	4,916	3,918	2,366	57,643
11 to 20	26,305	23,501	6,894	4,801	3,485	1,841	66,917
21 to 50	46,458	40,778	10,078	10,252	7,007	2,704	117,277
51 to 100.. ..	36,155	34,309	8,648	7,444	5,253	2,695	94,504
101 to 200 ..	38,628	34,533	13,930	8,316	4,387	2,079	101,873
201 to 300 ..	20,736	24,624	4,589	4,440	1,606	296	56,291
301 to 400 ..	14,572	15,728	972	1,662	..	1,061	33,995
401 to 500 ..	11,796	9,955	2,279	930	448	..	25,408
501 to 750 ..	25,248	16,130	2,943	4,571	694	2,762	52,348
751 to 1,000 ..	11,535	8,547	2,469	772	..	..	23,323
Over 1,000 ..	49,575	22,870	5,082	14,498	2,119	3,156	97,300
Total ..	315,774	257,793	66,531	64,837	31,406	20,220	756,561
Average per Factory	25.70	25.29	22.59	27.07	13.77	18.69	24.26

3. **Australia, 1938–39 and 1942–43 to 1945–46.**—In the following table factories in Australia during 1938–39 and each of the four years 1942–43 to 1945–46 are classified according to the number of persons engaged in conformity with the practice prior to 1945–46.

FACTORIES : CLASSIFICATION ACCORDING TO NUMBER OF PERSONS ENGAGED, AUSTRALIA.

Year.	Establishments Employing on the Average—							
	20 and under.		21 to 100.		101 and upwards.		Total.	
	Establishments.	Persons engaged.	Establishments.	Persons engaged.	Establishments.	Persons engaged.	Establishments.	Persons engaged.
1938–39—								
Number	21,982	129,505	4,013	170,971	946	272,022	26,941	572,498
Average per establishment	..	5.89	..	42.60	..	287.55	..	21.25
Percentage on total ..	81.59	22.62	14.90	29.86	3.51	47.52	100.00	100.00
1942–43—								
Number	21,032	123,039	4,104	173,187	1,278	469,175	26,414	765,401
Average per establishment	..	5.85	..	42.20	..	367.12	..	28.98
Percentage on total ..	79.62	16.08	15.54	22.63	4.84	61.29	100.00	100.00
1943–44—								
Number	22,050	129,239	4,325	182,561	1,299	460,802	27,674	772,602
Average per establishment	..	5.86	..	42.21	..	354.74	..	27.92
Percentage on total ..	79.68	16.73	15.63	23.63	4.69	59.64	100.00	100.00
1944–45—								
Number	23,059	137,153	4,579	193,359	1,292	427,002	28,930	757,514
Average per establishment	..	5.95	..	42.23	..	330.50	..	26.18
Percentage on total ..	79.70	18.11	15.83	25.52	4.47	56.37	100.00	100.00
1945–46—								
Number	24,819	154,242	5,080	211,781	1,285	390,538	31,184	756,561
Average per establishment	..	6.21	..	41.69	..	303.92	..	24.26
Percentage on total ..	79.59	20.39	16.29	27.99	4.12	51.62	100.00	100.00

§ 3. Power Equipment in Factories.

1. **General.**—In 1936–37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the "rated horse-power" of engines ordinarily in use and of engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication it is essential that some distinction should be made between Central Electric Stations and other classes of industries. In the following tables Central Electric Stations have been treated separately from other factories.

In para. 2 below, 1,125 factories are shown as using no power other than hand-power, the distribution of these factories among the various industries being as follows: Lime, Plaster and Asphalt, 17; Chemicals, Drugs and Medicines, 22; Galvanized Ironworking, Tinsmithing, 34; Ready-made Tailoring and Clothing, 306; Dressmaking, 105; Millinery, 36; Bakeries, 145; Cabinet and Furniture Making, 20; all other industries, 440.

2. **Rated Horse-power of Engines in Factories other than Central Electric Stations.**—The following table shows the number of factories using steam, gas, oil, electricity, or water power, those using hand-power, and the rated horse-power of engines ordinarily in use and in reserve or idle during 1945–46 :—

FACTORIES(*a*) : RATED HORSE-POWER OF ENGINES, 1945–46.

State.	Number of Establishments.			Rated Horse-power of Engines.	
	Using Power.	Others.	Total.	Ordinarily in use.	In Reserve or Idle (omitting obsolete).
	No.	No.	No.	H.P.	H.P.
New South Wales ..	12,016	271	12,287	952,325	112,018
Victoria	9,851	344	10,195	654,026	99,905
Queensland	2,807	138	2,945	241,809	27,226
South Australia ..	2,234	161	2,395	187,144	28,605
Western Australia ..	2,102	178	2,280	86,337	7,531
Tasmania	1,049	33	1,082	89,792	11,221
Australia.. ..	30,059	1,125	31,184	2,211,433	286,506

(*a*) Excludes Central Electric Stations.

3. **Rated Horse-power of Engines Ordinarily in Use.**—(i) *According to Type, States.* Particulars of the types of engines ordinarily in use in each State and their rated horse-power are given in the next table :—

FACTORIES(*a*) : TYPES AND RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, 1945–46.

State.	Rated Horse-power of Engines ordinarily in use.								Total. (*b*)
	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (*c*)	
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. .	104,638	56,812	3,221	6,489	14,057	141	766,967	81,674	952,325
Victoria ..	29,543	37,725	3,501	4,799	10,392	1,389	566,677	60,389	654,026
Queensland ..	80,748	15,068	7,459	3,819	14,842	..	119,873	49,055	241,809
S. Australia ..	9,073	6,010	3,953	2,991	7,756	15	157,346	16,989	187,144
W. Australia ..	9,169	80	2,281	2,059	7,716	..	65,032	6,855	86,337
Tasmania ..	3,207	2,041	66	3,719	1,426	192	79,141	11,730	89,792
Australia ..	236,378	117,736	20,481	23,876	56,189	1,737	1,755,036	226,692	2,211,433

(*a*) Excludes Central Electric Stations. (*b*) Excludes particulars in column (*c*).

(ii) *According to Type, Australia.* In the following table details of the horse-power of the various types of engines in use are given for Australia for the years 1942–43 to 1945–46 compared with 1938–39.

FACTORIES(*a*) : TYPES AND RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, AUSTRALIA.

Year.	Rated Horse-power of Engines ordinarily in use.								
	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (*b*)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (*c*)	
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1938–39 ..	268,409	84,149	32,914	17,970	55,800	1,616	1,017,911	179,889	1,478,769
1942–43 ..	246,661	123,967	21,898	18,079	56,669	1,749	1,509,486	190,991	1,978,509
1943–44 ..	244,042	121,570	20,318	19,500	56,693	1,621	1,602,264	192,631	2,066,008
1944–45 ..	239,319	118,438	21,280	21,407	57,012	1,581	1,673,348	191,619	2,132,385
1945–46 ..	236,378	117,736	20,481	23,876	56,189	1,737	1,755,036	226,692	2,211,433

(*a*) Excludes Central Electric Stations. (*b*) Excludes particulars in column (*c*).

(iii) *In Classes of Industry,* 1945–46. The next table shows the rated horse-power of engines ordinarily in use in the various classes of industry in each State during 1945–46.

FACTORIES(*a*) : RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, 1945–46.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.Aust.	W.Aust.	Tas.	Aust.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treatment of Non-metalliferous Mine and Quarry Products	41,600	34,512	8,167	6,556	5,205	9,294	105,334
II. Bricks, Pottery, Glass, etc. ..	28,523	18,496	3,914	4,576	2,776	778	59,063
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	45,763	59,587	3,991	23,036	7,607	536	140,520
IV. Industrial Metals, Machines, Implements and Conveyances	483,189	180,632	53,523	77,248	22,367	19,450	836,409
V. Precious Metals, Jewellery and Plate	1,931	2,351	158	498	189	14	5,141
VI. Textiles and Textile Goods ..	31,693	60,923	3,300	5,688	1,216	4,231	107,051
VII. Skins and Leather ..	12,551	12,678	3,126	2,750	1,434	586	33,125
VIII. Clothing	14,113	16,232	1,577	1,708	1,005	314	34,949
IX. Food, Drink and Tobacco ..	130,056	112,445	117,287	34,664	24,370	9,397	428,219
X. Woodworking and Basketware	67,019	52,344	35,474	14,643	13,396	14,962	197,838
XI. Furniture, Bedding, etc. ..	10,315	8,576	3,614	3,679	2,275	976	29,435
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	34,707	48,264	5,002	7,860	3,082	28,660	127,575
XIII. Rubber	28,505	29,414	1,312	837	134	163	60,365
XIV. Musical Instruments ..	826	65	15	15	..	..	921
XV. Miscellaneous Products ..	9,595	10,144	272	699	449	276	21,435
Total, Classes I. to XV. ..	940,386	646,663	240,732	184,457	85,505	89,637	2,187,380
XVI. Gas Works	11,939	7,363	1,077	2,687	832	155	24,053
Grand Total	952,325	654,026	241,809	187,144	86,337	89,792	2,211,433

(*a*) Excludes Central Electric Stations.

4. **Capacity of Engines and Generators installed in Central Electric Stations.**—(i) *According to Type, Australia.* Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1945–46 are given in the following table :—

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1945–46.

Particulars.	Capacity of Engines and Generators.						
	Steam.		Internal Combustion.			Water.	Total.
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		
Engines installed—							
Total installed Rated H.P.	25,682	2,268,641	22,034	3.076	159,456	365,007	2,843,896
Generators installed—							
Kilowatt capacity—							
Total installed .. K.W.	16.792	1,644,448	14,814	1,968	106,186	268,518	2,052,726
Effective capacity ,,	16,000	1,368,068	12,743	1,801	95,864	236,824	1,731.300
Maximum load .. ,,	13,027	1,114,273	10,138	1,481	70,819	213,938	1,423,676
Horse-power equivalent—							
Total installed .. H.P.	22,510	2,204,465	19,859	2,638	142,348	359.962	2,751,782
Effective capacity ,,	21,449	1,833,964	17.083	2,414	128,510	317.474	2,320.894
Maximum load .. ,,	17,463	1,493,739	13,591	1,985	94,936	286,795	1,908,509

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1945–46 are given in the next table.

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, 1945–46.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Engines installed Rated H.P.	1,203,094	740,178	289,886	200,398	156,930	253,410	2,843,896
Generators installed—							
Kilowatt capacity—							
Total installed .. K.W.	899.201	513,833	196,587	142,461	113.019	187,625	2,052.726
Effective capacity ,,	782,492	409.855	139.436	141,776	100.999	156,742	1,731.300
Maximum load .. ,,	483,145	468,410	125,436	130,970	80,816	134,899	1,423,676
Horse-power equivalent—							
Total installed .. H.P.	1,205,124	688,819	263.534	190,976	151,508	251,521	2,751.782
Effective capacity ,,	1,018,970	549,431	186,921	190.058	135.394	210,120	2,320,894
Maximum load .. ,,	647,680	627,927	168,153	175,572	108,338	180,839	1,908,509

§ 4. Employment in Factories.

1. **Number Engaged.**—(1) *General.* All persons engaged in the manufacturing activities of a factory, including proprietors who work in their own business and "outworkers" (*see* par. 4 (ii) hereinafter) are counted as factory employees, while all those are excluded who are engaged in selling and distributing, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods and retailing storemen. Prior to 1945–46 the classification of employment distinguished between (i) working proprietors ; (ii) managers and overseers ; (iii) accountants and clerks ; (iv) enginedrivers and firemen ; (v) workers, skilled and unskilled ; (vi) carters and messengers ; and (vii) others. This grouping, however, did not make adequate provision for measuring the development that has taken place in the employment of chemists and other research workers. As a result, the classification of factory employment was amended in 1945–46 to read as follows :—(i) Working proprietors ; (ii) managerial and clerical staff including salaried managers and working directors ; (iii) chemists, draftsmen and other laboratory and research staff ; (iv) foremen and overseers ; (v) skilled and unskilled workers ; (vi) carters (excluding delivery only), messengers and persons working regularly at home for factory, mill or workshop.

Prior to the year 1928–29 employment in factories was computed by dividing the sum of the number engaged each week by the number of weeks worked. The figures therefore, represented the average number engaged over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928–29 the figure represents the equivalent average number engaged over a full year of fifty-two weeks. The classification of factories according to the number of persons engaged (*see* § 2 *ante*), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) *Australia*, 1936–37 *to* 1945–46. Particulars of the number employed, the increase in employment and the rate per cent. of such increase are given for years 1936–37 to 1945–46 in the following table :—

FACTORIES : EMPLOYMENT, AUSTRALIA.

Year.	Males.			Females.			Persons.		
	Number Employed.	Increase on Previous Year.		Number Employed.	Increase on Previous Year.		Number Employed.	Increase on Previous Year.	
		Number.	Per cent.		Number.	Per cent.		Number.	Per cent.
1936–37 ..	381,412	24,858	6.97	142,536	6,319	4.64	523,948	31,177	6.33
1937–38 ..	408,602	27,190	7.13	150,558	8,022	5.63	559,160	35,212	6.72
1938–39 ..	412,591	3,989	0.98	152,515	1,957	1.30	565,106	5,946	1.06
1939–40 ..	426,934	14,343	3.48	160,729	8,214	5.39	587,663	22,557	3.99
1940–41 ..	473,058	46,124	10.80	177,015	16,286	10.13	650,073	62,410	10.62
1941–42 ..	524,383	51,325	10.85	200,959	23,944	13.53	725,342	75,269	11.58
1942–43 ..	535,570	11,187	2.13	223,475	22,516	11.20	759,045	33,703	4.65
1943–44 ..	539,141	3,571	0.67	227,365	3,890	1.74	766,506	7,461	0.98
1944–45 ..	535,893	−3,248	−0.60	214,686	−12,679	−5.58	750,579	−15,927	−2.08
1945–46 ..	548,888	12,995	2.42	196,370	−18,316	−8.53	745,258	−5,321	−0.71

NOTE.—Minus sign (−) indicates decrease.

(iii) *States*, 1938–39 *and* 1942–43 *to* 1945–46. The following table shows, for each of the years 1938–39 and 1942–43 to 1945–46 (*a*) the average number of persons (including both sexes of all ages) engaged in manufacturing industries in each State ; (*b*) for each State, the percentage of the total number engaged in Australia ; and (*c*) the number engaged per ten thousand of the mean population in each State and Australia.

FACTORIES : EMPLOYMENT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	AVERAGE NUMBER ENGAGED DURING FULL YEAR (52 WEEKS).						
1938–39 ..	228,781	201,831	54,110	43,371	23,211	13,802	565,106
1942–43 ..	315,524	262,358	64,292	72,748	25,813	18,310	759,045
1943–44 ..	323,032	261,331	64,682	69,569	28,101	19,791	766,506
1944–45 ..	314,678	257,637	64,135	65,472	29,146	19,511	750,579
1945–46 ..	310,870	256,249	65,460	63,188	30,256	19,235	745,258
	PERCENTAGE ON AUSTRALIAN TOTAL.						
	%	%	%	%	%	%	%
1938–39 ..	40.48	35.72	9.58	7.67	4.11	2.44	100.00
1942–43 ..	41.58	34.56	8.47	9.58	3.40	2.41	100.00
1943–44 ..	42.14	34.09	8.44	9.08	3.67	2.58	100.00
1944–45 ..	41.93	34.33	8.54	8.72	3.88	2.60	100.00
1945–46 ..	41.72	34.38	8.78	8.48	4.06	2.58	100.00

FACTORIES : EMPLOYMENT—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	PER 10,000 OF POPULATION.						
1938–39 ..	837	1,076	537	730	502	583	816
1942–43 ..	1,116	1,332	617	1,188	538	759	1,055
1943–44 ..	1,133	1,316	612	1,125	583	812	1,056
1944–45 ..	1,092	1,286	599	1,048	598	792	1,023
1945–46 ..	1,067	1,268	603	999	615	771	1,005

2. **Rates of Increase, 1938–39 and 1942–43 to 1945–46.**—The percentage increase on the average number of persons engaged in the preceding year is shown below for each State for 1938–39 and 1942–43 to 1945–46.

FACTORIES : ANNUAL PERCENTAGE INCREASE OF PERSONS ENGAGED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	%	%	%	%	%	%	%
1938–39	1.74	0.02	3.82	−1.62	0.34	4.80	1.06
1942–43	5.79	1.53	3.85	11.49	7.64	4.29	4.65
1943–44	2.38	−0.39	0.61	−4.37	8.86	8.09	0.98
1944–45	−2.50	−1.41	−0.85	−5.89	3.72	−1.41	−2.08
1945–46	−1.21	−0.54	2.07	−3.49	3.81	−1.41	−0.71

NOTE.—Minus sign —) indicates decrease.

3. **Persons Engaged in Classes of Industry.**—(i) *Australia.* The following table shows the average number of persons engaged in factories under each industrial group in Australia for the years 1938–39 and 1942–43 to 1945–46.

FACTORIES : PERSONS ENGAGED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
I. Treatment of Non-metalliferous Mine and Quarry Products	10,343	8,001	7,701	7,933	9,929
II. Bricks, Pottery, Glass, etc. ..	15,709	10,428	9,616	10,459	13,466
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	19,816	54,101	42,551	36,340	31,471
IV. Industrial Metals, Machines, Implements and Conveyances.. ..	177,677	328,142	341,030	319,314	292,477
V. Precious Metals, Jewellery and Plate	3,726	2,358	2,373	2,399	3,240
VI. Textiles and Textile Goods ..	46,082	58,661	58,539	57,204	55,008
VII. Skins and Leather	10,767	12,056	12,708	12,474	14,492
VIII. Clothing	86,092	80,573	80,692	86,391	93,370
IX. Food, Drink and Tobacco	83,846	96,448	101,630	105,194	105,878
X. Woodworking and Basketware ..	30,739	33,658	34,827	35,382	38,346
XI. Furniture, Bedding, etc.	15,287	10,216	9,563	9,930	13,107
XII. Paper, Stationery, Printing, Bookbinding, etc	39,913	35,645	35,193	36,726	39,905
XIII. Rubber	7,502	7,178	7,061	7,970	8,699
XIV. Musical Instruments	451	392	353	392	459
XV. Miscellaneous Products	7,727	12,320	12,699	13,018	14,838
Total, Classes I. to XV. ..	555,677	750,177	757,436	741,126	734,685
XVI. Heat, Light and Power	9,429	8,868	9,070	9,453	10,573
Grand Total ..	565,106	759,045	766,506	750,579	745,258

Following the outbreak of war in the Pacific in 1941, the transfer of man-power to the more essential industries became apparent, and industries not directly concerned with Australia's war effort showed a marked decline. The industries which declined were those in Class I., Mine and Quarry Products ; Class II., Bricks, Pottery, Glass, etc. ; Class V., Precious Metals ; Class VIII., Clothing ; Class XI., Furniture ; and Class XII., Paper, etc., while industries where the war-time expansion in employment occurred were those in Class III., Chemicals, etc.; Class IV., Metals, etc.; Class VI., Textiles; Class VII., Skins and Leather; and Class IX., Food.

Following the cessation of hostilities in 1945 and the relaxation of man-power control which permitted movement of employees between industries, Class III., Chemicals, etc.; Class IV., Metals, etc.; and Class VI., Textiles recorded lower levels of employment in 1945–46 while in each other class of industry a higher level of employment was recorded.

(ii) *States.* Particulars of the numbers engaged in each industrial class are shown in the following table for each State :—

FACTORIES : PERSONS ENGAGED IN INDUSTRIAL CLASSES, 1945–46.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	4,376	2,659	889	888	670	447	9,929
II. Bricks, Pottery, Glass, etc. ..	7,466	3,574	615	1,168	517	126	13,466
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	13,164	11,961	955	3,845	1,396	150	31,471
IV. Industrial Metals, Machines, Implements and Conveyances	136,602	88,421	21,617	29,395	10,869	5,573	292,477
V. Precious Metals, Jewellery and Plate	1,110	1,602	165	238	109	16	3,240
VI. Textiles and Textile Goods ..	18,341	29,889	1,297	2,334	740	2,407	55,008
VII. Skins and Leather ..	6,385	4,884	1,168	1,323	526	206	14,492
VIII. Clothing	37,651	38,552	6,614	6,111	3,568	874	93,370
IX. Food, Drink and Tobacco ..	35,474	33,811	17,825	9,244	5,189	4,335	105,878
X. Woodworking and Basketware	13,499	10,139	6,967	2,571	2,819	2,351	38,346
XI. Furniture, Bedding, etc. ..	4,937	3,724	1,697	1,386	872	441	13,107
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	16,959	13,723	3,349	2,583	1,515	1,776	39,905
XIII. Rubber	3,990	3,644	535	283	135	112	8,699
XIV. Musical Instruments ..	311	83	23	37	5	..	459
XV. Miscellaneous Products ..	6,407	6,570	596	580	446	239	14,838
Total, Classes I. to XV.	306,722	253,236	64,312	61,986	29,376	19,053	734,685
XVI. Heat, Light and Power ..	4,148	3,013	1,148	1,202	880	182	10,573
Grand Total ..	310,870	256,249	65,460	63,188	30,256	19,235	745,258

4. **Persons Engaged According to Grade of Employment.**—(i) *General.* In the following table the average number of persons engaged in the States during 1945–46 are classified on the new basis according to the grade of their employment. Persons employed in factories are now classified on a basis different from that adopted prior to 1945–46. The nature of this change is indicated in § 4 (i).

PERSONS ENGAGED : GRADE OF EMPLOYMENT, 1945–46.

Average Number of Persons Engaged.

State	Working Proprietors.	Managerial and Clerical Staff, etc.(*a*)	Chemists, Draftsmen, etc.	Foremen and Overseers.	Workers in Factory (Skilled and Unskilled).	Carters (excluding Delivery only) and Messengers, etc. (*b*)	Total.
New South Wales ..	9,414	31,616	3,873	10,577	253,145	2,245	310,870
Victoria	8,089	24,236	3,255	9,439	208,725	2,505	256,249
Queensland ..	2,261	6,064	396	1,838	54,119	782	65,460
South Australia ..	1,695	6,441	737	2,216	51,744	355	63,188
Western Australia..	1,379	2,445	181	941	25,092	218	30,256
Tasmania ..	682	1,767	240	638	15,757	151	19,235
Australia ..	23,520	72,569	8,682	25,649	608,582	6,256	745,258

(*a*) Including salaried managers and working directors. (*b*) Including persons working regularly at home.

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be done in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers employed by factories in each State during the years 1938–39 and 1941–42 to 1944–45. Owing to the altered classification of employment adopted in 1945–46, persons working regularly at home for factories are now included with carters and messengers and separate details of the numbers of homeworkers are no longer available.

FACTORIES : OUTWORKERS.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938–39	201	120	6	11	7	11	356
1941–42	469	191	10	17	4	11	702
1942–43	534	196	5	17	12	8	772
1943–44	531	289	4	19	12	7	862
1944–45	599	389	7	29	18	7	1,049

(a) In all tables relating to number of hands employed in factories, outworkers are included.

5. **Monthly Employment, 1938–39 and 1943–44 to 1946–47.**—The number of persons employed in factories (excluding working proprietors) on the pay-day nearest to the 15th of each month is shown in the following table for the years 1938–39 and 1943–44 to 1946–47.

FACTORIES : MONTHLY EMPLOYMENT, AUSTRALIA.

Month.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
MALES.					
July	387,603	518,181	518,841	518,734	571,662
August	389,979	519,135	518,672	519,122	579,354
September	391,576	519,747	517,013	511,909	583,281
October	393,977	520,687	516,152	505,753	584,007
November	395,192	519,233	515,695	503,296	575,255
December	394,438	520,147	515,384	489,040	564,055
January	385,742	519,367	512,269	513,396	565,550
February	392,056	521,480	513,880	533,761	574,034
March	395,146	520,558	515,455	543,347	578,469
April	391,005	518,197	514,414	547,253	580,792
May	393,609	518,178	513,232	553,980	589,070
June	390,973	518,176	514,501	558,428	593,202
Mean	391,780	519,424	515,459	524,835	578,228
FEMALES.					
July	147,282	227,382	217,633	204,705	193,337
August	149,294	228,134	216,491	204,150	195,225
September	151,159	229,206	215,491	199,331	196,271
October	152,473	229,104	213,686	193,587	197,480
November	152,806	228,373	212,604	191,689	197,874
December	151,165	226,958	211,507	183,899	196,748
January	141,853	223,991	207,464	184,810	193,565
February	151,883	223,900	210,401	188,632	198,264
March	154,854	225,144	212,206	192,699	200,737
April	152,614	222,457	209,147	192,084	199,467
May	150,693	218,648	207,556	192,215	199,341
June	148,601	217,430	206,335	192,137	199,893
Mean	150,390	225,060	211,710	193,328	197,350

FACTORIES : MONTHLY EMPLOYMENT, AUSTRALIA—*continued.*

Month.	1938–39.	1943–44.	1944–45.	1945–46.	1946–47.
			PERSONS.		
July	534,975	745,563	736,474	723,439	764,999
August	539,273	747,269	735,163	723,272	774,579
September	542,735	748,953	732,504	711,240	779,552
October	546,450	749,791	729,838	699,340	781,487
November	547,998	747,606	728,299	694,985	773,129
December	545,603	747,105	726,891	672,939	760,803
January	527,595	743,358	719,733	698,206	759,115
February	543,939	745,380	724,281	722,393	772,298
March	550,000	745,702	727,661	736,046	779,206
April	543,619	740,654	723,561	739,337	780,259
May	544,302	736,826	720,788	746,195	788,411
June	539,574	735,606	720,836	750,565	793,095
Mean	542,170	744,484	727,169	718,163	775,578

6. **Distribution of Employees According to Age.**—(i) *States.* The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups in 1945–46 instead of three as in previous years. The particulars are collected as at June. The number employed in each age-group in June, 1946, are given below :—

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1946.

(Excluding Working Proprietors.)

Age Groups.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			MALES.				
Under 16 years ..	2,451	3,449	1,237	829	739	311	9,016
16 years	5,110	3,884	1,370	1,074	823	372	12,633
17 ,, ...	6,233	4,263	1,460	1,233	882	410	14,481
18 ,, ...	7,273	4,736	1,616	1,269	836	466	16,196
19 ,, ...	5,892	4,073	1,376	1,056	643	406	13,446
20 ,, ...	5,581	3,880	1,235	1,012	551	398	12,657
21 ,, and over ..	203,801	155,504	42,386	45,438	19,993	12,877	479,999
Total ..	236,341	179,789	50,680	51,911	24,467	15,240	558,428
			FEMALES.				
Under 16 years ..	2,265	3,007	1,020	885	478	226	7,881
16 years	4,032	3,130	815	679	552	229	9,437
17 ,, ...	4,667	3,510	818	802	548	259	10,604
18 ,, ...	5,091	3,963	856	947	558	341	11,756
19 ,, ...	4,747	3,530	779	869	496	287	10,708
20 ,, ..	4,816	3,435	756	804	425	277	10,513
21 ,, and over ..	56,701	54,632	6,378	8,018	2,950	2,559	131,238
Total ..	82,319	75,207	11,422	13,004	6,007	4,178	192,137
			PERSONS.				
Under 16 years ..	4,716	6,456	2,257	1,714	1,217	537	16,897
16 years	9,142	7,014	2,185	1,753	1,375	601	22,070
17 ,, ...	10,900	7,773	2,278	2,035	1,430	669	25,085
18 ,, ...	12,364	8,699	2,472	2,216	1,394	807	27,952
19 ,, ...	10,639	7,603	2,155	1,925	1,139	693	24,154
20 ,, ...	10,397	7,315	1,991	1,816	976	675	23,170
21 ,, and over ..	260,502	210,136	48,764	53,456	22,943	15,436	611,237
Total ..	318,660	254,996	62,102	64,915	30,474	19,418	750,565

(ii) *Australia.* As comparative details based on the new age grouping are not available for the years prior to 1945–46, the following table shows the age distribution in sexes for Australia in June, 1939 and 1943 to 1946 on the old basis.

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, AUSTRALIA.

(Excluding Working Proprietors.)

In June—	Under 16 Years.		16 and under 21 Years.		Adults.		Total.	
	No.	%	No.	%	No.	%	No.	%
				MALES.				
1939 ..	16,109	4.12	76,418	19.55	298,446	76.33	390,973	100
1943 ..	14,538	2.79	64,036	12.30	442,062	84.91	520,636	100
1944 ..	13,114	2.53	64,990	12.54	440,072	84.93	518,176	100
1945 ..	11,706	2.28	66,875	13.00	435,920	84.72	514,501	100
1946 ..	9,016	1.61	69,413	12.43	479,999	85.96	558,428	100
				FEMALES.				
1939 ..	15,497	10.43	56,273	37.87	76,831	51.70	148,601	100
1943 ..	9,897	4.33	63,646	27.84	155,057	67.83	228,600	100
1944 ..	9,445	4.34	60,844	27.98	147,141	67.68	217,430	100
1945 ..	9,178	4.45	56,158	27.22	140,999	68.33	206,335	100
1946 ..	7,881	4.10	53,018	27.59	131,238	68.31	192,137	100
				PERSONS.				
1939 ..	31,606	5.86	132,691	24.59	375,277	69.55	539,574	100
1943 ..	24,435	3.26	127,682	17.04	597,119	79.70	749,236	100
1944 ..	22,559	3.07	125,834	17.11	587,213	79.82	735,606	100
1945 ..	20,884	2.90	123,033	17.07	576,919	80.03	720,836	100
1946 ..	16,897	2.25	122,431	16.31	611,237	81.44	750,565	100

§ 5. Sex Distribution in Factories.

1. **Distribution According to Sex of Persons Engaged.**—(i) *General.* In New South Wales the ratio of the number of females engaged in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and in 1945–46 was one to nearly three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and in 1945–46 was about one to two. In the remaining States the ratio in 1945–46 was roughly one female engaged to every four males. For Australia as a whole the ratio of females employed in factories was highest in 1943–44 at about two females to five males but by 1945–46 the ratio had declined to about the pre-war level of one female to nearly three males.

(ii) *Average Number of Males and Females Engaged.* The following table shows the average number of males and females engaged in factories in each State for 1938–39 and the four years 1942–43 to 1945–46 :—

FACTORIES : MALES AND FEMALES ENGAGED.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
			MALES.		
New South Wales ..	167,172	223,660	226,824	223,770	227,454
Victoria..	136,218	175,341	175,078	174,424	178,951
Queensland	43,941	50,325	50,822	51,483	53,587
South Australia	35,406	52,793	50,660	49,056	49,523
Western Australia ..	18,704	19,501	21,060	22,404	24,268
Tasmania	11,150	13,941	14,697	14,756	15,105
Australia	412,591	535,570	539,141	535,893	548,888
			FEMALES.		
New South Wales ..	61,609	91,855	96,208	90,908	83,416
Victoria	65,613	87,017	86,253	83,213	77,298
Queensland	10,169	13,967	13,860	12,652	11,873
South Australia	7,965	19,955	18,909	16,416	13,665
Western Australia ..	4,507	6,312	7,041	6,742	5,988
Tasmania	2,652	4,369	5,094	4,755	4,130
Australia	152,515	223,475	227,365	214,686	196,370

2. **Rate of Variation for each Sex.**—The percentages of increase or decrease on the average numbers of males and females engaged in the preceding year are shown below for the years 1938–39 and 1942–43 to 1945–46 :—

ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES ENGAGED.

State.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
MALES.					
	%	%	%	%	%
New South Wales . . .	1.69	3.14	1.42	− 1.35	1.65
Victoria	0.04	−0.20	− 0.15	− 0.37	2.60
Queensland	3.79	1.27	1.11	1.30	4.09
South Australia	− 2.39	5.76	− 4.04	− 3.17	0.95
Western Australia . .	− 0.30	3.54	8.00	6.38	8.32
Tasmania	4.40	4.12	5.42	0.40	2.37
Total	0.98	2.16	0.67	− 0.60	2.42
FEMALES.					
New South Wales . .	1.88	12.86	4.74	− 5.51	− 8.24
Victoria	− 0.03	5.21	− 0.88	− 3.52	− 7.11
Queensland	3.96	14.35	− 0.77	− 8.72	− 6.16
South Australia	1.98	30.14	− 5.24	−13.18	−16.76
Western Australia . .	3.06	22.66	11.55	− 4.25	−11.18
Tasmania	6.51	4.85	16.59	− 6.65	−13.14
Total	1.30	11.20	1.74	− 5.58	− 8.53

NOTE.—The minus sign (−) indicates decrease.

3. **Masculinity of Persons Engaged in Factories.**—The extent to which females are engaged in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons engaged in each State. The following table shows particulars for the years 1938–39 and 1942–43 to 1945–46 :—

FACTORIES : MASCULINITY(*a*) OF PERSONS ENGAGED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938–39	271	208	432	445	415	420	271
1942–43	244	202	360	265	309	319	240
1943–44	236	203	367	268	299	289	237
1944–45	246	210	407	299	332	310	250
1945–46	273	232	451	362	405	366	280

(*a*) Number of males per 100 females.

For a number of years prior to 1926–27 there were on the average 300 males engaged in factories for every 100 females, but in that year the proportion of males began to fall with the increasing activity in the clothing and textile industries, in which the number of females to males is relatively high. As these trades were not so seriously affected by the depression as the heavier industries, the proportion of males continued to fall, until in 1932–33 there were only 239 males engaged to every 100 females. With the recovery of employment in the heavier industries subsequent to that year, the proportion of males per 100 females had increased to 271 in 1937–38 and 1938–39.

The decrease in masculinity from 1938–39 to 1943–44 resulted from the enlistment of men in the armed services and the expansion of industry caused by the war. In many industries the younger men were released for service in the defence forces and large numbers of women were absorbed as an adjustment to the industrial effort of Australia. Following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased. In 1945–46, at 280 males per 100 females, it was slightly higher than pre-war.

4. Employment of Females in Particular Industries.—(i) *General.* The greater number of females in manufacturing industries are engaged in four classes, namely :—IV., Industrial Metals, Machines, etc. ; VI., Textiles ; VIII., Clothing ; and IX., Food, Drink and Tobacco. In 1945–46 these industries accounted for 80.92 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 129 females to every 100 males and in Class VIII., Clothing, with 270 females per 100 males. The following tables show the average number of males and females engaged in each of these classes in 1945–46 :—

MALES AND FEMALES ENGAGED IN PARTICULAR INDUSTRIES, 1945–46.

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
IV. Industrial Metals, etc. ..	121,060	78,383	20,369	26,725	10,178	5,323	262,038
VI. Textiles and Textile Goods ..	7,610	13,208	597	1,121	375	1,071	23,982
VIII. Clothing	9,964	11,025	1,567	1,527	803	267	25,243
IX. Food, Drink and Tobacco ..	23,637	23,811	15,366	6,803	3,985	2,967	76,569
All Other Classes	65,183	52,524	15,688	13,347	8,837	5,477	161,056
Total	227,454	178,951	53,587	49,523	24,268	15,105	548,888
FEMALES.							
IV. Industrial Metals, etc. ..	15,542	10,038	1,248	2,670	691	250	30,439
VI. Textiles and Textile Goods ..	10,731	16,681	700	1,213	365	1,336	31,026
VIII. Clothing	27,687	27,527	5,047	4,584	2,675	607	68,127
IX. Food, Drink and Tobacco ..	11,837	10,000	2,459	2,441	1,204	1,368	29,309
All Other Classes	17,619	13,052	2,419	2,757	1,053	569	37,469
Total	83,416	77,298	11,873	13,665	5,988	4,130	196,370

(ii) *Females Engaged in Clothing Trade.* The employment of females in the several industries of Class VIII., Clothing—in which class the largest number of females are employed—and the relation of their number to that of the males so engaged are shown in the following table :—

FEMALES ENGAGED IN EACH INDUSTRY IN CLASS VIII., 1945–46.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females.	Femininity (*a*)	Males.	Females.	Femininity. (*a*)	Males.	Females.	Femininity. (*a*)
Tailoring and Ready-made Clothing ..	2,319	12,848	554	1,943	6,489	334	1,280	5,168	404
Waterproof and Oilskin Clothing ..	32	171	534	85	208	245	6	28	467
Dressmaking, Hemstitching ..	75	1,781	2,375	849	9,031	1,064	122	3,179	2,606
Millinery	128	1,137	888	214	938	438	39	558	1,431
Shirts, Collars and Underclothing ..	453	4,435	979	351	2,915	830	142	1,606	1,131
Foundation Garments	83	957	1,153	107	784	733	14	144	1,029
Handkerchiefs, Ties and Scarves ..	90	600	667	42	223	531	..	..	..
Hats and Caps ..	581	659	113	436	254	58	28	106	379
Gloves	73	325	445	107	498	465	32	145	453
Boots and Shoes ..	3,055	2,998	98	4,939	4,525	92	1,515	1,232	81
Boot and Shoe Repairing ..	1,430	96	7	746	25	3	636	48	8
Boot and Shoe Accessories ..	220	125	57	96	134	140	27	2	7
Umbrellas and Walking Sticks ..	24	36	150	9	14	156	8	17	213
Dyeworks and Cleaning (including Renovating and Repairing) ..	1,392	1,444	104	1,013	1,053	104	405	675	167
Other	9	75	833	88	436	495	..	5	(*b*)
Total ..	9,964	27,687	278	11,025	27,527	250	4,254	12,913	304

(*a*) Number of females per 100 males. (*b*) Not applicable.

§ 6. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.

2. **Number of Children Engaged, 1939 and 1943 to 1946.**—In the returns for the various States, the term " child " denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 16,897 in June, 1946, which is most marked in all States excepting Western Australia, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years 1939 and 1943 to 1946.

FACTORIES: CHILDREN ENGAGED, JUNE.

State.	1939.	1943.	1944.	1945.	1946.
			MALES.		
New South Wales ..	5,759	4,221	3,881	3,287	2,451
Victoria	6,167	5,251	5,031	4,607	3,449
Queensland	1,790	2,126	1,732	1,567	1,237
South Australia	1,296	1,506	1,232	1,066	829
Western Australia ..	705	878	753	763	739
Tasmania	392	556	485	416	311
Australia	16,109	14,538	13,114	11,706	9,016
			FEMALES.		
New South Wales ..	7,084	3,158	3,014	2,870	2,265
Victoria	5,005	3,477	3,731	3,609	3,007
Queensland	1,334	1,308	1,017	992	1,020
South Australia	1,053	1,206	1,020	1,017	885
Western Australia ..	521	404	356	338	478
Tasmania	500	344	307	352	226
Australia	15,497	9,897	9,445	9,178	7,881
			TOTAL.		
New South Wales ..	12,843	7,379	6,895	6,157	4,716
Victoria	11,172	8,728	8,762	8,216	6,456
Queensland	3,124	3,434	2,749	2,559	2,257
South Australia	2,349	2,712	2,252	2,083	1,714
Western Australia ..	1,226	1,282	1,109	1,101	1,217
Tasmania	892	900	792	768	537
Australia	31,606	24,435	22,559	20,884	16,897

3. **Percentage of Children on Total Number of Persons Engaged.**—The following table shows the percentage of children on the total number of persons engaged in the various states in June of each of the five years 1939 and 1943 to 1946. In 1946 the percentage was highest in Western Australia and lowest in New South Wales.

PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF PERSONS ENGAGED.

(Excluding Working Proprietors.)

State.	June—				
	1939.	1943.	1944.	1945.	1946.
	%	%	%	%	%
New South Wales	5.85	2.35	2.23	2.04	1.48
Victoria..	5.81	3.43	3.51	3.32	2.53
Queensland	6.01	5.35	4.31	4.14	3.63
South Australia	5.78	3.81	3.42	3.33	2.64
Western Australia ..	5.61	4.79	4.03	3.84	3.09
Tasmania	6.78	4.75	4.07	4.09	2.77
Australia	5.86	3.26	3.07	2.90	2.25

4. **Industries Employing Child Labour.**—The distribution of children employed in factories in June, 1946, and the percentage on the total number employed are given in the following table according to the class of industry :—

FACTORIES : CHILDREN EMPLOYED, BY CLASSES, JUNE, 1946.

Class of Industry.	Children Employed.		Total Number Employed.(*a*)		Percentage of Children on Total Number Employed. (*a*)	
	Males.	Females.	Males.	Females.	Males.	Females.
	No.	No.	No.	No.	%	%
I. Treatment of Non-metalliferous Mine and Quarry Products..	91	5	10,746	390	0.85	1.28
II. Bricks, Pottery, Glass, etc. ..	141	26	14,031	1,046	1.00	2.49
III. Chemicals, Dyes, Explosives Paints, Oils and Grease ..	230	213	22,932	8,141	1.00	2.62
IV. Industrial Metals, Machines, Implements and Conveyances	3,796	614	264,455	26,422	1.44	2.32
V. Precious Metals, Jewellery and Plate	114	39	2,976	581	3.83	6.71
VI. Textiles and Textile Goods ..	735	1,280	26,788	30,942	2.74	4.14
VII. Skins and Leather	157	113	11,273	3,788	1.39	2.98
VIII. Clothing	624	3,810	24,068	70,663	2.59	5.39
IX. Food, Drink and Tobacco ..	969	848	72,935	26,897	1.33	3.15
X. Woodworking and Basketware	620	46	35,779	1,692	1.73	2.72
XI. Furniture, Bedding, etc. ..	485	81	11,834	2,281	4.10	3.55
XII. Paper, Stationery, Printing, Bookbinding, etc.	625	604	30,968	12,157	2.02	4.97
XIII. Rubber	81	20	7,906	1,645	1.02	1.22
XIV. Musical Instruments ..	12	3	384	102	3.13	2.94
XV. Miscellaneous Products ..	304	179	10,383	5,296	2.93	3.38
Total, Classes I. to XV.	8,984	7,881	547,458	192,043	1.64	4.10
XVI. Heat, Light and Power.. ..	32	..	10,970	94	0.29	..
Grand Total	9,016	7,881	558,428	192,137	1.61	4.10

(*a*) Excludes working proprietors.

5. **Apprenticeship.**—In all the States, acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

NOTE.—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1945–46 was £867,647,517, of which amount £488,287,428 represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £27,036,648 the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely £352,323,441, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e. "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production." The total amount of salaries and wages paid in factories in 1945–46 was £205,818,733. This figure, which excludes amounts drawn by working proprietors, shows a decrease of £1,833,067 or slightly under 1 per cent. on that for the previous year.

2. **Salaries and Wages Paid.**—(i) *In Classes of Industry*, 1945–46. The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table :—

FACTORIES : SALARIES AND WAGES PAID, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	1,363,653	815,994	269,924	260,466	166,096	119,209	2,995,342
II. Bricks, Pottery, Glass, etc.	2,213,130	1,002,859	163,309	314,436	136,066	34,026	3,863,826
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	3,968,805	3,714,276	274,282	1,160,736	428,058	44,063	9,590,220
IV. Industrial Metals, Machines, Implements and Conveyances ..	42,478,010	26,876,774	6,362,770	8,523,323	3,074,708	1,655,688	88,071,273
V. Precious Metals, Jewellery and Plate	280,786	433,617	32,475	57,100	24,892	2,763	831,633
VI. Textiles and Textile Goods	4,262,638	7,233,154	274,030	527,066	161,639	554,812	13,013,339
VII. Skins and Leather ..	1,734,110	1,474,729	340,388	363,390	141,785	60,822	4,115,224
VIII. Clothing	7,316,412	8,018,580	1,143,726	1,025,849	554,190	151,800	18,210,557
IX. Food, Drink and Tobacco ..	9,736,354	9,419,282	5,405,176	2,393,615	1,438,649	1,052,475	29,445,551
X. Woodworking and Basketware ..	3,585,682	2,715,949	1,767,616	629,089	726,577	557,020	9,981,933
XI. Furniture, Bedding, etc.	1,375,447	843,010	399,371	291,245	188,698	78,864	3,176,635
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	4,885,988	3,857,265	900,275	654,634	411,547	554,239	11,263,948
XIII. Rubber	1,255,163	1,158,070	143,492	71,518	30,075	23,573	2,681,801
XIV. Musical Instruments	89,232	22,331	5,443	8,465	1,079	..	126,550
XV. Miscellaneous Products	1,578,997	1,805,674	133,271	109,258	86,412	55,771	3,769,383
Total, Classes I. to XV.	86,124,407	69,391,564	17,615,548	16,390,190	7,570,471	4,945,125	202,037,305
XVI. Heat, Light and Power	1,523,053	1,107,650	396,418	379,578	313,343	61,386	3,781,428
Grand Total ..	87,647,460	70,499,214	18,011,066	16,769,768	7,883,814	5,006,511	205,818,733

(ii) *Totals and Averages*, 1938–39 *and* 1942–43 *to* 1945–46. The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The average wage paid is not comparable with that shown in similar tables in issues of the Official Year Book prior to No. 23, 1930, on account of the change in the method of computing the average number of hands employed, as explained earlier. The figures exclude working proprietors and the amounts drawn by them :—

FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.

Year.	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1938–39	Total amount paid . .	44,606,497	36,026,542	10,887,229	8,169,350	4,573,558	2,479,886	106,743,062
	Average per employee	201.77	185.64	210.78	195.57	207.90	188.31	196.31
1942–43	Total amount paid . .	88,900,826	73,035,253	16,737,545	19,243,290	6,477,113	4,472,816	208,866,843
	Average per employee	289.12	286.21	268.64	270.10	260.74	252.73	282.73
1943–44	Total amount paid . .	93,518,326	73,961,193	18,071,689	18,711,413	7,417,595	5,193,603	216,873,819
	Average per employee	297.45	291.85	288.27	275.00	273.44	270.85	291.16
1944–45	Total amount paid . .	89,243,041	70,560,011	17,979,827	17,246,148	7,614,213	5,008,530	207,651,800
	Average per employee	291.93	282.90	289.91	269.53	271.20	265.32	285.21
1945–46	Total amount paid . .	87,647,460	70,499,214	18,011,966	16,769,768	7,883,811	5,006,511	205,818,733
	Average per employee	290.75	284.09	285.00	272.71	273.01	269.85	285.17

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1945–46 were paid in New South Wales, Queensland and Victoria in that order.

The average earnings per employee rose annually from 1938–39 to 1943–44 when the record high level of £291 was attained as a result of war-time conditions. In 1944–45 the average dropped to £285 and remained at this level in 1945–46.

(iii) *Earnings of Males and Females*, 1945–46. The following table shows the approximate amount of salaries and wages paid to males and females in each class of industry in each State during the year 1945–46 :—

SALARIES AND WAGES : MALE AND FEMALE FACTORY EMPLOYEES, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			MALES.				
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	1,335,224	791,119	265,016	254,814	162,932	117,700	2,926,805
II. Bricks, Pottery, Glass etc.	2,106,839	944,413	158,553	304,587	128,800	33,598	3,676,790
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease . .	3,286,849	3,127,920	236,071	995,839	403,896	41,045	8,091,620
IV. Industrial Metals, Machines, Implements and Conveyances . .	39,575,345	24,929,679	6,142,095	8,064,602	2,954,262	1,614,903	83,280,886
V. Precious Metals, Jewellery and Plate	247,222	378,489	29,228	53,402	23,763	2,633	734,737
VI. Textiles and Textile Goods	2,128,585	4,208,800	168,405	305,963	102,126	320,403	7,633,282
VII. Skins and Leather . .	1,302,795	1,280,866	319,084	324,015	128,664	58,766	3,513,190
VIII. Clothing	2,759,345	3,189,277	391,558	370,155	204,594	69,432	6,984,361
IX. Food, Drink and Tobacco . .	7,706,684	7,714,343	5,016,027	2,031,811	1,264,563	828,025	24,561,453
X. Woodworking and Basketware . .	3,158,288	2,640,432	1,718,331	607,072	722,711	517,175	9,694,009
XI. Furniture, Bedding, etc.	1,189,924	742,037	372,324	260,758	173,594	75,125	2,813,762
XII. Paper, Stationery, Printing, Bookbinding, etc. . .	4,009,136	3,217,956	732,988	542,815	354,972	511,277	9,369,144
XIII. Rubber	1,108,546	1,012,129	127,302	66,076	28,091	22,331	2,364,475
XIV. Musical Instruments	74,835	22,109	5,443	8,039	1,079	. .	111,505
XV. Miscellaneous Products	1,186,965	1,371,748	99,221	86,196	70,927	41,723	2,856,780
Total, Classes I. to XV	71,866,582	55,670,317	15,781,646	14,276,144	6,724,974	4,293,136	168,612,799
XVI. Heat, Light and Power	1,513,464	1,102,456	[illegible]	375,389	312,556	60,426	3,763,251
Grand Total . .	73,380,046	56,772,773	16,477,606	14,651,533	7,037,530	4,353,562	172,376,050

SALARIES AND WAGES: MALE AND FEMALE FACTORY EMPLOYEES, 1945–46—*continued.*

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
FEMALES.							
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	28,429	24,875	4,908	5,652	3,164	1,509	68,537
II. Bricks, Pottery, Glass, etc.	106,291	58,446	4,756	9,849	7,266	428	187,036
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	681,956	586,356	38,211	164,897	24,162	3,018	1,498,600
IV. Industrial Metals, Machines, Implements and Conveyances ..	2,902,665	1,947,095	220,675	458,721	120,446	40,785	5,690,387
V. Precious Metals, Jewellery and Plate	33,564	55,128	3,247	3,698	1,129	130	96,896
VI. Textiles and Textile Goods	1,834,053	2,931,354	105,625	221,103	59,513	225,409	5,380,057
VII. Skins and Leather ..	341,315	184,863	21,304	39,375	13,121	2,056	602,034
VIII. Clothing	4,557,067	4,829,303	752,168	655,694	349,596	82,368	11,226,196
IX. Food, Drink and Tobacco ..	2,029,670	1,704,939	389,149	361,804	174,086	224,450	4,884,098
X. Woodworking and Basketware ..	127,394	75,517	49,285	22,017	3,866	9,845	287,924
XI. Furniture, Bedding, etc.	185,523	100,973	27,047	30,487	15,104	3,739	362,873
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	876,852	639,309	167,287	111,819	56,575	42,962	1,894,804
XIII. Rubber	146,617	145,941	16,190	5,442	1,984	1,242	317,416
XIV. Musical Instruments	14,397	222	..	426	..	..	15,045
XV. Miscellaneous Products	392,032	433,926	34,050	23,062	15,485	14,048	912,603
Total, Classes I. to XV.	14,257,825	13,721,247	1,833,902	2,114,046	845,497	651,989	33,424,506
XVI. Heat, Light and Power	9,589	5,194	458	1,189	787	960	18,177
Total ..	14,267,414	13,726,441	1,834,360	2,115,235	846,284	652,949	33,442,683

(iv) *Total and Average Earnings of Males and Females,* 1938–39 *and* 1942–43 *to* 1945–46. Particulars for these years are given in the table hereunder :—

TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES.

	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	MALES.							
1938–39.	Amount paid .. £	38,271,867	29,005,746	9,920,001	7,487,828	4,128,824	2,234,413	91,048,679
	Per cent. on total ..	85.80	80.51	91.12	91.66	90.28	90.10	85.30
	Average per employee £	239.24	224.47	238.59	220.95	235.49	212.09	231.84
1942–43.	Amount paid .. £	74,554,677	58,089,270	14,939,988	16,118,870	5,650,928	3,876,990	173,230,723
	Per cent. on total ..	83.86	79.54	89.26	83.76	87.24	86.68	82.94
	Average per employee £	344.72	344.06	308.49	313.74	304.34	290.30	335.17
1943–44.	Amount paid .. £	77,087,334	58,610,714	15,984,325	15,499,866	6,367,387	4,374,298	177,923,924
	Per cent. on total ..	82.43	79.25	88.45	82.84	85.84	84.22	82.04
	Average per employee £	352.15	349.02	326.70	314.09	316.28	310.15	342.68
1944–45.	Amount paid .. £	73,934,690	56,114,675	16,058,748	14,553,972	6,657,713	4,265,044	171,584,842
	Per cent. on total ..	82.85	79.53	89.32	84.39	87.44	85.16	82.63
	Average per employee £	342.98	336.03	324.60	305.39	311.36	301.54	333.03
1945–46.	Amount paid .. £	73,380,046	56,772,773	16,177,606	14,654,533	7,037,530	4,353,562	172,376,050
	Per cent. on total ..	83.72	80.53	89.82	87.39	89.27	86.96	83.75
	Average per employee £	335.34	330.86	314.56	305.70	306.74	301.35	326.99

TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES —*continued.*

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
	FEMALES.							
1938-39.	Amount paid .. £	6,334,630	7,020,796	967,228	681,522	444,734	245,473	15,694,383
	Per cent. on total ..	14.20	19.49	8.80	8.34	9.72	9.00	14.70
	Average per employee £	103.66	108.25	96.00	86.44	99.55	93.19	103.92
1942-43.	Amount paid .. £	14,346,149	14,945,983	1,797,557	3,124,420	826,185	595,82[illegible]	35,636,120
	Per cent. on total ..	16.14	20.46	10.74	16.24	12.76	13.32	17.06
	Average per employee £	157.29	173.10	129.55	157.27	131.70	137.19	160.59
1943-44.	Amount paid .. £	16,130,992	15,350,479	2,087,364	3,211,547	1,050,208	810,305	38,940,805
	Per cent. on total ..	17.57	20.75	11.55	17.16	14.16	15.78	17.96
	Average per employee £	172.07	179.55	151.65	170.59	150.14	161.57	172.62
1944-45.	Amount paid .. £	15,308,351	14,445,336	1,921,079	2,692,176	956,530	743,486	36,066,058
	Per cent. on total ..	17.15	20.47	10.68	15.61	12.56	14.84	17.37
	Average per employee £	169.83	175.27	153.12	164.86	142.01	157.09	169.44
1945-46.	Amount paid .. £	14,267,414	13,726,441	1,834,360	2,115,235	846,284	652,949	33,442,683
	Per cent. on total ..	16.28	19.47	10.18	12.61	10.73	13.04	16.25
	Average per employee £	172.65	179.26	155.85	156.05	142.62	159.02	171.88

(v) *Managers, Clerical Staff and Other Employees.* A further analysis of salaries and wages paid is given in the following table for 1945–46 and shows the amounts paid to managers, clerical staff, etc., and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases :—

SALARIES AND WAGES: MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, 1945–46.

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Clerical Staff, Chemists, Draftsmen, etc.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	392,111	48,837	2,534,694	19,700	2,926,805	68,537	2,995,342
II. Bricks, Pottery, Glass, etc.	368,674	78,925	3,308,116	108,111	3,676,790	187,036	3,863,826
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	1,745,860	406,080	6,345,760	1,092,520	8,091,620	1,498,600	9,590,220
IV. Industrial Metals, Machines, Implements and Conveyances ..	11,060,663	2,453,057	72,220,223	3,237,330	83,280,886	5,690,387	88,971,273
V. Precious Metals, Jewellery and Plate	79,723	32,920	655,014	63,976	734,737	96,896	831,633
VI. Textiles and Textile Goods	1,082,204	379,786	6,551,078	5,000,271	7,633,282	5,380,057	13,013,339
VII. Skins and Leather ..	439,812	74,388	3,073,378	527,646	3,513,190	602,034	4,115,224
VIII. Clothing	1,142,070	609,580	5,842,291	10 616,616	6,984,361	11,226,196	18,210,557
IX. Food, Drink and Tobacco ..	3,841,954	936,482	20,719,499	3,947,616	24,561,453	4,884,098	29,445,551
X. Woodworking and Basketware ..	906,273	178,881	8,787,736	109,043	9,694,009	287,924	9,981,933
XI. Furniture, Bedding, etc.	287,340	84,270	2,526,422	278,603	2,813,762	362,873	3,176,635
XII. Paper, Stationery, Printing, Bookbinding, etc. .	1,475,664	494,803	7,893,480	1,400,001	9,369,144	1,894,804	11,263,948
XIII. Rubber	437,130	100,885	1,927,345	216,531	2,364,475	317,416	2,681,891
XIV. Musical Instruments	8,409	6,805	103,096	8,240	111,505	15,045	126,550
XV. Miscellaneous Products	584,720	191,381	2,272,060	721,222	2,856,780	912,603	3,769,383
Total, Classes I. to XV.	23,852,607	6,077,080	144,760,192	27,347,426	168,612,799	33,424,506	202,037,305
XVI. Heat, Light and Power	456,106	15,344	3,307,145	2,833	3,763,251	18,177	3,781,428
Grand Total ..	24,308,713	6,092,424	148,067,337	27,350,259	172,376,050	33,442,683	205,818,733
Average paid per employee	489.62	192.78	310.08	167.82	320.99	171.88	285.17

3. **Power, Fuel and Light Used.**—(i) *In Classes of Industry*, 1945–46. The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1945–46 it amounted to £27,036,648, an increase of £203,897 as compared with the previous year. The following table shows the value of power, fuel and light, etc., used in the different classes of industry in that year:—

FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED (*a*), 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	356,471	258,369	96,552	99,703	58,940	72,351	942,386
II. Bricks, Pottery, Glass, etc.	688,295	381,040	45,895	116,266	65,640	11,234	1,308,370
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	589,499	480,236	48,931	224,031	121,689	7,027	1,471,413
IV. Industrial Metals, Machines, Implements and Conveyances ..	4,557,202	1,260,881	293,453	968,739	161,931	362,632	7,604,838
V. Precious Metals, Jewellery and Plate	14,434	17,542	1,125	4,364	944	152	38,561
VI. Textiles and Textile Goods	285,883	558,628	16,204	54,700	14,439	39,422	969,276
VII. Skins and Leather ..	126,353	142,346	35,948	47,451	20,741	17,199	390,038
VIII. Clothing	203,857	220,122	26,621	27,952	15,359	5,510	499,421
IX. Food, Drink and Tobacco ..	1,596,197	1,455,216	808,687	455,709	328,867	147,991	4,792,667
X. Woodworking and Basketware ..	239,286	150,996	84,256	32,130	51,885	37,361	595,914
XI. Furniture, Bedding, etc.	37,340	22,982	10,088	10,030	4,063	2,131	86,634
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	226,105	378,010	36,211	78,331	19,836	193,534	932,027
XIII. Rubber	149,208	194,429	14,546	7,780	3,171	3,181	372,315
XIV. Musical Instruments	6,280	542	89	107	4	..	7,022
XV. Miscellaneous Products	76,907	85,505	4,995	7,335	2,129	2,037	178,908
Total, Classes I. to XV.	9,153,317	5,606,844	1,523,601	2,134,628	869,638	901,762	20,189,790
XVI. Heat, Light and Power	3,053,324	1,334,136	774,418	716,692	966,039	2,249	6,846,858
Grand Total ..	12,206,641	6,940,980	2,298,019	2,851,320	1,835,677	904,011	27,036,648

(*a*) Includes value of lubricants and water.

(ii) *Values of Items*, 1945–46. The following table shows the values of the various items of power, fuel and light used in factories in each State during the year 1945–46:—

FACTORIES: VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(*a*), 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
Coal, Black	3,972,052	1,309,963	1,047,251	786,611	478,377	119,464	7,713,718
,, Brown	..	544,036	..	..	..	..	544,036
Brown Coal Briquettes .	..	621,264	..	..	..	..	621,264
Coke	2,045,978	365,653	44,048	470,446	48,651	45,126	3,019,902
Wood .. .	239,217	431,113	219,743	203,087	362,553	161,948	1,617,661
Fuel Oil..	1,044,834	541,665	192,793	355,758	425,500	88,436	2,648,986
Tar (Fuel)	150,445	112,759	39	45,110	5,120	6,396	319,869
Electricity	2,939,851	2,053,152	471,173	677,911	338,405	422,644	6,903,136
Gas	839,920	189,696	34,565	61,255	18,867	6,562	1,150,865
Other (Charcoal, etc.) ..	50,428	136,426	52,733	88,033	12,644	1,746	342,010
Water	574,634	409,261	106,525	85,022	73,240	25,231	1,273,913
Lubricating Oil	349,282	225,992	129,149	78,087	72,320	26,458	881,288
Total	12,206,641	6,940,980	2,298,019	2,851,320	1,835,677	904,011	27,036,648

(*a*) Includes value of lubricants and water.

(iii) *Quantities of Fuel used*, 1945–46. The following table shows the quantities of fuel used in factories in each State during the year 1945–46 :—

FACTORIES : QUANTITIES OF FUEL USED, 1945–46.

Particulars.	Unit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Coal, Black	Ton	2,959,244	587,099	642,716	399,080	262,003	77,124	4,927,266
,, Brown	,,	..	4,226,326	..	..	..	..	4,226,326
Brown Coal Briquettes	,,	..	417,460	..	..	..	..	417,460
Coke	,,	1,180,805	166,330	20,457	174,394	19,649	12,725	1,574,360
Wood	,,	176,962	508,848	254,882	158,602	399,222	168,004	1,666,520
Fuel Oil	Gal.	23,511,329	11,722,251	3,653,072	8,114,454	8,064,816	1,094,016	56,159,938
Tar (Fuel)	,,	15,407,405	6,172,049	3,100	2,262,196	475,006	461,962	24,781,718

(iv) *Total Value*, 1938–39 *and* 1942–43 *to* 1945–46. The next table shows the sums expended on power, fuel and light during the years 1942–43 to 1945–46 compared with 1938–39 :—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED.(*a*)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
	£	£	£	£	£	£	£
1938–39	7,651,627	3,999,934	1,423,549	1,017,537	1,169,268	438,006	15,699,921
1942–43	12,307,663	6,514,447	2,105,774	2,469,301	1,437,624	791,713	25,626,522
1943–44	12,808,040	6,826,742	2,162,113	2,436,049	1,503,344	844,381	26,580,669
1944–45	12,564,956	6,946,053	2,222,879	2,555,739	1,645,987	897,137	26,832,751
1945–46	12,206,641	6,940,980	2,298,019	2,851,320	1,835,677	904,011	27,036,648

(*a*) Includes value of lubricants and water.

4. **Value of Materials Used.**—(i) *In Classes of Industry*, 1945–46. The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1945–46 was £488,287,428, representing 56·28 per cent. of the value of the final output (*see* par. 5). The following table shows the value of the materials used in various classes of industry in each State :—

FACTORIES : VALUE OF MATERIALS USED, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	3,596,231	1,441,819	567,904	438,009	266,920	199,493	6,510,376
II. Bricks, Pottery, Glass, etc.	1,576,011	622,176	105,660	271,077	90,578	25,765	2,691,267
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	16,056,053	12,385,437	1,080,414	3,625,898	2,779,919	314,667	36,242,388
IV. Industrial Metals, Machines, Implements and Conveyances ..	72,762,281	36,817,123	7,146,788	13,750,681	3,324,068	3,163,046	136,963,987
V. Precious Metals, Jewellery and Plate	337,267	610,009	21,676	32,740	29,805	537	1,032,034
VI. Textiles and Textile Goods	10,913,554	16,425,777	672,272	1,140,628	357,686	1,234,474	30,744,391
VII. Skins and Leather ..	4,856,904	3,779,432	2,299,846	1,272,595	263,942	206,626	12,679,345
VIII. Clothing	12,220,703	15,471,407	1,671,291	1,087,311	768,428	158,480	31,377,620
IX. Food, Drink and Tobacco ..	51,897,036	49,387,219	39,183,374	12,354,839	8,000,053	4,599,844	165,422,365
X. Woodworking and Basketware ..	8,021,065	5,170,584	3,064,555	1,639,201	1,120,078	951,973	19,967,456
XI. Furniture, Bedding, etc.	2,548,535	1,742,823	721,724	525,354	378,811	115,953	6,033,200
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	8,769,589	7,856,302	1,115,959	900,208	576,401	898,529	20,116,988
XIII. Rubber	3,757,049	3,812,889	316,817	133,671	63,266	41,917	8,125,609
XIV. Musical Instruments	63,242	9,595	2,437	566	130	..	75,970
XV. Miscellaneous Products	2,330,858	2,547,719	139,524	183,459	76,587	31,813	5,309,960
Total, Classes I. to XV.	199,706,378	158,080,311	58,110,241	37,356,237	18,096,672	11,943,117	483,292,956
XVI. Heat, Light and Power	1,999,708	1,717,630	522,838	413,813	263,963	76.520	4,994,472
Grand Total ..	201,706,086	159,797,941	58.633,079	37,770,050	18,360,635	12,019,637	488,287,428

(ii) *Total Amount*, 1938–39 *and* 1942–43 *to* 1945–46. The following table shows the values of materials used in factories for the years 1942–43 to 1945–46 compared with 1938–39 :—

FACTORIES : VALUE OF MATERIALS USED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
	£	£	£	£	£	£	£
1938–39 ..	120,501,795	82,971,608	42,596,040	20,308,797	9,603,657	5,321,540	281,303,446
1942–43 ..	207,599,130	149,630,126	55,063,141	36,745,047	13,845,868	9,836,766	472,720,078
1943–44 ..	223,603,640	154,490,654	57,945,796	36,730,842	15,193,718	10,958,410	498,923,060
1944–45 ..	215,219,002	158,098,951	59,593,548	35,284,903	17,134,744	11,557,523	496,888,671
1945–46 ..	201,706,086	159,797,041	58,633,079	37,770,050	18,360,635	12,019,637	488,287,428

5. **Value of Output.**—(i) *In Classes of Industry*, 1945–46. The value of the output of factories in the various classes in each State in 1945–46 is shown in the following table. It represents the wholesale selling value at the factory of goods made or processed during the year, including by-products. In addition, it includes the value of other work done such as repair work, assembling and making up for customers. The figures given include not only the increase in value due to the process of manufacture, but also the values of the raw materials and the power, fuel and light used. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (*see* par. 6).

FACTORIES : VALUE OF OUTPUT, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	6,352,882	3,315,588	1,160,360	975,209	594,432	527,331	12,925,802
II. Bricks, Pottery, Glass, etc.	5,574,133	2,718,311	408,589	901,054	377,671	85,326	10,065,084
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	28,024,635	20,260,798	1,725,382	6,154,150	3,732,871	397,424	60,295,260
IV. Industrial Metals, Machines, Implements and Conveyances ..	139,890,197	77,243,145	16,668,166	25,716,672	8,211,781	6,531,222	274,261,183
V. Precious Metals, Jewellery and Plate	817,156	1,349,056	82,473	116,609	77,052	4,105	2,446,451
VI. Textiles and Textile Goods	18,608,267	29,183,535	1,148,402	2,034,778	626,039	2,148,603	53,749,624
VII. Skins and Leather ..	7,829,553	6,469,308	2,890,982	1,924,824	511,424	293,434	19,919,525
VIII. Clothing	24,474,939	28,928,234	3,567,975	2,640,051	1,702,560	398,043	61,711,802
IX. Food, Drink and Tobacco ..	76,032,953	70,538,377	50,169,293	17,047,144	11,602,906	6,812,098	232,202,771
X. Woodworking and Basketware ..	14,025,443	9,518,189	5,759,750	2,770,365	2,267,449	1,812,466	36,153,662
XI. Furniture, Bedding, etc.	4,760,610	3,418,440	1,400,505	1,015,695	745,010	246,788	11,587,048
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	17,465,658	15,423,419	2,802,957	2,116,086	1,392,226	2,344,873	41,545,219
XIII. Rubber	5,492,063	6,131,232	573,716	260,250	131,870	90,469	12,679,600
XIV. Musical Instruments	214,653	46,238	11,584	16,164	1,326	..	289,965
XV. Miscellaneous Products	5,174,508	5,842,021	369,150	376,533	206,571	128,992	12,097,775
Total, Classes I. to XV.	354,737,650	280,385,891	88,739,284	64,065,584	32,181,188	21,821,174	841,930,771
XVI. Heat, Light and Power	12,354,566	6,603,517	2,461,467	2,157,414	1,841,651	298,131	25,716,746
Grand Total ..	367,092,216	286,989,408	91,200,751	66,222,998	34,022,839	22,119,305	867,647,517

(ii) *Total*, 1938–39 *and* 1942–43 *to* 1945–46. The following table shows the value of output in each State during each of the years shown.

FACTORIES : VALUE OF OUTPUT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1938–39 ..	218,419,313	152,967,611	63,321,073	35,005,264	19,548,511	11,158,205	500,419,977
1942–43 ..	373,489,055	277,635,940	86,213,475	67,568,707	26,737,549	18,703,930	850,348,656
1943–44 ..	399,137,690	284,647,914	90,318,437	67,578,377	29,208,588	20,848,210	891,739,216
1944–45 ..	387,658,585	287,422,311	92,718,465	65,107,692	31,740,740	21,356,984	886,004,777
1945–46 ..	367,092,216	286,989,408	91,200,751	66,222,998	34,022,839	22,119,305	867,647,517

6. **Value of Production.**—(i) *In Classes of Industry*, 1945-46. The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production".

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and "value of fuel used" as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was subsequently agreed that the particulars obtained should be published but that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained, therefore, by deducting "value of materials used" and "value of fuel used" from the "value of the output."

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 8, par. 4, was estimated at £17,134,005 for 1945–46. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The following table shows the value of production in 1945–46 in each State for the various classes of factories :—

FACTORIES : VALUE OF PRODUCTION, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	2,400,180	1,615,400	495,904	437,497	268,572	255,487	5,473,040
II. Bricks, Pottery, Glass, etc.	3,309,827	1,715,095	257,034	513,711	221,453	48,327	6,065,447
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	11,379,083	7,395,125	596,037	2,304,221	831,263	75,730	22,581,459
IV. Industrial Metals, Machines, Implements and Conveyances ..	62,570,714	39,165,141	9,227,925	10,997,252	4,725,782	3,005,544	129,692,358
V. Precious Metals, Jewellery and Plate	465,455	721,505	59,672	79,505	46,303	3,416	1,375,856
VI. Textiles and Textile Goods	7,408,830	12,199,130	459,926	839,450	253,914	874,707	22,035,957
VII. Skins and Leather ..	2,846,296	2,547,530	555,188	604,778	226,741	69,609	6,850,142
VIII. Clothing	12,050,379	13,236,705	1,870,063	1,524,788	918,773	234,053	29,834,761
IX. Food, Drink and Tobacco ..	22,539,720	19,695,942	10,177,232	4,236,596	3,273,986	2,064,263	61,987,739
X. Woodworking and Basketware ..	5,765,092	4,196,609	2,610,939	1,099,034	1,095,486	823,132	15,590,292
XI. Furniture, Bedding, etc.	2,174,735	1,652,635	668,693	480,311	362,136	128,704	5,467,214
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	8,469,964	7,189,107	1,650,787	1,137,547	795,989	1,252,810	20,496,204
XIII. Rubber	1,585,806	2,123,914	242,353	118,799	65,433	45,371	4,181,676
XIV. Musical Instruments	145,131	36,101	9,058	15,491	1,192	..	206,973
XV. Miscellaneous Products	2,766,743	3,208,797	224,631	185,739	127,855	95,142	6,608,907
Total, Classes I. to XV.	145,877,955	116,698,736	29,105,442	24,574,719	13,214,878	8,976,295	338,448,025
XVI. Heat, Light and Power	7,301,534	3,551,751	1,164,211	1,026,909	611,649	219,362	13,875,416
Grand Total ..	153,179,489	120,250,487	30,269,653	25,601,628	13,826,527	9,195,657	352,323,441

(ii) *Total and Averages,* 1938–39 *and* 1942–43 *to* 1945–46. The value of production and the amount per person engaged and per head of population are shown in the following table for the last four years compared with 1938–39 :—

FACTORIES : VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				VALUE.			
	£	£	£	£	£	£	£
1938–39 ..	90,265,891	65,996,069	19,301,475	13,678,930	8,775,586	5,398,659	203,416,610
1942–43 ..	153,682,262	121,391,367	29,044,560	28,354,359	11,454,057	8,075,451	352,002,056
1943–44 ..	162,726,010	123,330,518	30,210,528	28,411,486	12,511,526	9,045,419	366,235,487
1944–45 ..	159,874,627	122,377,307	30,902,038	27,267,050	12,960,009	8,902,324	362,283,355
1945–46 ..	153,179,489	120,250,487	30,269,653	25,601,628	13,826,527	9,195,657	352,323,441
				PER PERSON ENGAGED.			
	£	£	£	£	£	£	£
1938–39 ..	395	327	357	315	378	391	360
1942–43 ..	487	463	452	390	444	441	464
1943–44 ..	504	472	467	408	445	457	478
1944–45 ..	508	475	482	416	445	456	483
1945–46 ..	493	469	462	405	457	478	473
				PER HEAD OF POPULATION.			
	£	£	£	£	£	£	£
1938–39 ..	32.99	35.25	19.15	22.99	18.79	22.72	29.41
1942–43 ...	54.00	61.76	27.92	46.41	24.01	33.41	49.01
1943–44 ..	56.66	62.22	28.65	46.11	26.15	37.04	50.53
1944–45 ..	55.09	61.23	28.92	43.75	26.73	36.05	49.47
1945–46 ..	52.23	59.66	27.92	40.57	28.21	36.74	47.42

7. **Value of Output and Cost of Production.**—As the total value of the output for Australia for 1945–46 was estimated at £867,647,517, there remained, after payment of £488,287,428 for the value of the materials used, £205,818,733 for salaries and wages, and £27,036,648 for power, fuel and light, the sum of £146,504,708 to provide for all other expenditure, depreciation, interest and profits. The following table gives corresponding particulars for each State expressed absolutely and as percentages on the total value of the output for the year 1945–46 :—

FACTORIES : VALUE OF OUTPUT AND COST OF PRODUCTION, 1945–46.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Margin for other miscellaneous expenses, charges, profits, etc.	Total Value of Output.
			VALUE AND COST, ETC.		
	£	£	£	£	£
New South Wales ..	201,706,086	12,206,641	87,647,460	65,532,029	367,092,216
Victoria	159,797,941	6,940,980	70,499,214	49,751,273	286,989,408
Queensland	58,633,079	2,298,019	18,011,966	12,257,687	91,200,751
South Australia ..	37,770,050	2,851,320	16,769,768	8,831,860	66,222,998
Western Australia ..	18,360,635	1,835,677	7,883,814	5,942,713	34,022,839
Tasmania	12,019,637	904,011	5,006,511	4,189,146	22,119,305
Australia ..	488,287,428	27,036,648	205,818,733	146,504,708	867,647,517

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.
(b) Includes lubricants and water.

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1945–46—*continued.*

State.	Materials Used. (*a*)	Power, Fuel and Light. (*b*)	Salaries and Wages.	Margin for other miscellaneous expenses, charges, profits, etc.	Total Value of Output
PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.					
	%	%	%	%	%
New South Wales ..	54.95	3.33	23.88	17.84	100.00
Victoria	55.68	2.42	24.56	17.34	100.00
Queensland.. ..	64.29	2.52	19.75	13.44	100.00
South Australia ..	57.03	4.31	25.32	13.34	100.00
Western Australia ..	53.97	5.40	23.17	17.46	100.00
Tasmania	54.34	4.09	22.63	18.94	100.00
Australia ..	56.27	3.12	23.72	16.89	100.00

(*a*) Includes the value of containers ,packing, etc., also the cost of tools replaced and repairs to plant
(*b*) Includes lubricants and water.

§ 8. Value of Land, Buildings, Plant and Machinery.

1. **General.**—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1945–46 :—

FACTORIES : VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(*a*), 1945–46.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
	£	£	£	£	£	£	£
Land and buildings	80,308,347	60,264,953	14,331,556	18,446,966	8,282,694	5,304,703	186,939,219
Plant and machinery	72,560,630	58,537,394	18,690,541	19,017,955	8,507,705	8,230,715	185,544,940
Total ..	152,868,977	118,802,347	33,022,097	37,464,921	16,790,399	13,535,418	372.484,159

(*a*) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates for premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified

2. **Value of Land and Buildings.**—(i) *Total for Australia*, 1938–39 *and* 1942–43 *to* 1945–46. The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938–39 and 1942–43 to 1945–46.

FACTORIES : VALUE OF LAND AND BUILDINGS(*a*), AUSTRALIA.

Class of Industry.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	2,778,746	2,615,787	2,623,361	2,642,425	3,019,524
II. Bricks, Pottery, Glass, etc.	2,953,557	2,912,817	2,706,737	2,940,413	3,331,450
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	7,377,551	18,668,293	18,635,144	18,432,290	18,461,520
IV. Industrial Metals, Machines, Implements and Conveyances ..	34,841,028	53,041,129	60,043,410	60,783,523	59,530,238
V. Precious Metals, Jewellery and Plate	633,009	579,780	590,482	615,779	751,611
VI. Textiles and Textile Goods	5,999,671	7,996,992	8,378,695	8,770,139	9,111,725
VII. Skins and Leather ..	2,095,886	2,279,645	2,327,945	2,493,751	2,965,986
VIII. Clothing	10,623,619	11,133,533	11,852,661	12,660,045	13,993,956
IX. Food, Drink and Tobacco	33,273,248	35,927,769	37,376,297	39,321,977	40,129,049
X. Woodworking and Basketware	4,106,963	4,623,716	4,811,963	5,030,273	5,441,290
XI. Furniture, Bedding, etc...	2,533,254	2,366,887	2,259,307	2,293,762	2,828,984
XII. Paper, Stationery, Printing, Bookbinding, etc.	10,639,315	11,478,257	11,408,044	11,576,815	11,604,666
XIII. Rubber	1,676,043	1,643,420	1,684,331	1,737,861	1,865,044
XIV. Musical Instruments ..	104,838	99,949	98,829	116,074	133,182
XV. Miscellaneous Products ..	1,432,857	2,113,459	2,292,206	2,588,535	2,964,894
Total, Classes I. to XV...	121,069,585	157,481,433	167,089,412	172,003,662	176,133,119
XVI. Heat, Light and Power..	9,850,829	10,112,514	10,057,193	10,576,445	10,806,100
Grand Total ..	130,920,414	167,593,947	177,146,605	182,580,107	186,939,219

(*a*) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States*, 1945–46. The following table gives particulars of the various classes of industry in each State.

FACTORIES : VALUE OF LAND AND BUILDINGS, (*a*) 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	1,388,537	943,917	191,261	212,759	95,510	187,540	3,019,524
II. Bricks, Pottery, Glass, etc.	2,088,923	798,248	129,045	201,957	94,177	19,100	3,331,450
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	4,341,386	6,104,394	245,155	6,878,797	810,046	81,742	18,461,520
IV. Industrial Metals, Machines, Implements and Conveyances ..	30,564,445	17,174,574	3,736,404	4,315,509	2,385,627	1,353,679	59,530,238
V. Precious Metals, Jewellery and Plate	285,576	343,760	30,021	49,219	36,675	6,360	751,611
Textiles and Textile Goods	3,374,885	4,821,139	157,375	381,178	118,161	258,987	9,111,725
VII. Skins and Leather ..	1,212,386	1,206,083	148,241	238,082	124,482	36,709	2,965,986
VIII. Clothing	6,487,800	5,462,115	636,163	707,521	571,223	129,134	13,993,956
IX. Food, Drink and Tobacco ..	14,974,926	11,877,394	6,203,697	3,191,680	2,387,230	1,494,122	40,129,049
X. Woodworking and Basketware ..	2,504,701	1,467,433	550,237	431,639	303,885	183,395	5,441,290
XI. Furniture, Bedding, etc.	1,082,318	1,011,363	284,180	207,662	181,460	62,001	2,828,984
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	4,765,325	3,898,431	911,549	748,093	510,285	770,983	11,604,666
XIII. Rubber	856,381	721,245	129,471	75,123	47,834	34,990	1,865,044
XIV. Musical Instruments	86,989	32,339	2,560	8,174	3,120	..	133,182
XV. Miscellaneous Products	1,312,349	1,313,732	111,136	104,068	83,579	40,030	2,964,894
Total, Classes I. to XV.	75,326,927	57,176,167	13,466,498	17,751,461	7,753,294	4,658,772	176,133,119
XVI. Heat, Light and Power	4,981,420	3,088,786	865,058	695,505	529,400	645,931	10,806,100
Grand Total ..	80,308,347	60,264,953	14,331,556	18,446,966	8,282,694	5,304,703	186,939,219

(*a*) Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1938–39 and 1942–43 to 1945–46 :—

FACTORIES : VALUE OF LAND AND BUILDINGS.(*a*)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1938–39 ..	57,353,625	42,026,245	12,299,089	8,710,700	6,813,653	3,717,102	130,920,414
1942–43 ..	72,622,902	52,642,052	13,159,140	17,473,537	6,770,121	4,926,195	167,593,947
1943–44 ..	78,978,013	55,062,982	13,262,504	17,629,235	6,920,805	5,293,066	177,146,605
1944–45 ..	81,058,876	57,808,861	13,689,055	16,877,449	7,654,187	5,491,679	182,580,107
1945–46 ..	80,308,347	60,264,953	14,331,556	18,446,966	8,282,694	5,304,703	186,939,219

(*a*) Includes estimated value of rented premises.

Prior to 1929–30 the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929–30, a growth of £95 million in 27 years. During the three years ended 1932–33, however, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and stood at £186.9 million in 1945–46.

3. **Value of Plant and Machinery.**—(i) *Total for Australia,* 1938–39 *and* 1942–43 *to* 1945–46. The following table shows for Australia the approximate value of plant and machinery used in factories in 1938–39 and each of the four years ended 1945–46 :—

FACTORIES : VALUE OF PLANT AND MACHINERY(*a*), AUSTRALIA.

Class of Industry.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	7,028,382	5,624,798	5,089,274	4,955,979	4,916,338
II. Bricks, Pottery, Glass, etc.	3,144,586	2,580,261	2,246,369	2,509,661	2,967,696
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	6,754,248	17,083,211	17,411,181	19,208,586	17,791,778
IV. Industrial Metals, Machines, Implements and Conveyances ..	33,037,801	52,931,958	56,918,202	54,953,997	53,901,719
V. Precious Metals, Jewellery and Plate	197,059	200,445	219,266	207,620	253,062
VI. Textiles and Textile Goods	6,657,416	7,915,814	7,600,447	7,658,756	7,736,737
VII. Skins and Leather ..	973,181	1,160,754	1,224,852	1,264,612	1,584,051
VIII. Clothing	2,557,388	2,855,529	3,225,678	3,552,899	4,134,906
IX. Food, Drink and Tobacco	32,100,675	31,660,416	31,904,522	32,692,162	33,233,935
X. Woodworking and Basketware	3,907,551	4,299,740	4,486,081	4,533,758	5,023,174
XI. Furniture, Bedding, etc...	727,857	602,222	545,199	572,308	740,627
XII. Paper, Stationery, Printing, Bookbinding, etc.	9,188,227	10,074,519	9,531,486	8,961,222	8,556,477
XIII. Rubber	1,367,859	1,220,467	1,243,448	1,191,308	1,218,861
XIV. Musical Instruments ..	11,702	13,325	14,011	18,191	23,571
XV. Miscellaneous Products ..	758,273	1,384,164	1,547,403	1,763,939	1,855,931
Total, Classes I. to XV. ..	108,412,205	139,607,623	143,207,419	144,044,998	143,938,863
XVI. Heat, Light and Power ..	35,249,922	37,357,703	37,785,350	39,872,062	41,606,077
Grand Total ..	143,662,127	176,965,326	180,992,769	183,917,060	185,544,940

(*a*) Includes estimated value of rented plant.

Except for the years 1930–31 to 1933–34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in Australia. The increase in 1945–46 of £1.6 million extended over all industrial classes except Classes III. Chemicals, IV. Industrial Metals and XII. Paper, where reductions occurred. The greatest increase occurred in Class XVI. Heat, Light and Power.

(ii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1942–43 to 1945–46 compared with 1938–39. During 1945–46 decreases in New South Wales and Victoria were more than offset by increases in the other States.

FACTORIES : VALUE OF PLANT AND MACHINERY.(*a*)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1938–39 ..	62,692,956	38,626,743	18,095,415	9,749,679	8,095,064	6,402,270	143,662,127
1942–43 ..	73,121,771	51,963,258	18,793,878	17,848,070	7,105,019	8,133,330	176,965,326
1943–44 ..	73,803,954	55,457,719	17,886,417	18,415,477	7,364,909	8,064,293	180,992,769
1944–45 ..	73,039,252	58,571,064	18,134,011	17,955,288	8,254,231	7,963,214	183,917,060
1945–46 ..	72,560,630	58,537,394	18,690,541	19,017,955	8,507,705	8,230,715	185,544,940

(*a*) Includes estimated value of rented plant.

(iii) *Value according to Industry*, 1945-46. The following table shows the value of plant and machinery used in factories in each State during 1945-46 classified according to industry :—

FACTORIES : VALUE OF PLANT AND MACHINERY,(*a*) 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	2,666,470	1,311,900	294,950	384,295	122,028	136,695	4,916,338
II. Bricks, Pottery, Glass, etc.	1,774,573	759,723	103,385	192,090	107,781	30,144	2,967,696
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	4,691,101	6,752,375	230,591	5,025,434	1,060.992	31,285	17,791,778
IV. Industrial Metals, Machines, Implements and Conveyances ..	27,024,690	15,661,705	3,068,199	4,863,037	1,749,748	1,534,340	53,901,719
V. Precious Metals, Jewellery and Plate	88,630	130,889	7,612	14,228	10,536	1,167	253,062
VI. Textiles and Textile Goods	2,846,663	3,989,692	140,125	455,503	107,098	197,656	7,736,737
VII. Skins and Leather ..	618 581	570,639	125,972	131,367	98,037	39,455	1,584,051
VIII. Clothing	1,693,383	1,787,796	219,203	240,590	150,342	43,592	4,134,906
IX. Food, Drink and Tobacco ..	10,121,255	7,754,106	10,259,802	2,368,521	1,790,366	939,885	33,233,935
X. Woodworking and Basketware ..	1,846,210	1,251,999	801,574	279,293	464,722	379,376	5,023,174
XI. Furniture, Bedding, etc.	291,503	214,390	75,047	83,722	55,856	20,109	740,627
XII Paper, Stationery Printing, Bookbinding, etc. ..	3,478,128	2,645,775	462,316	634,954	230,262	1,105,042	8,556,477
XIII. Rubber	495,034	610,545	57,572	33,135	13,098	9,477	1,218,861
XIV. Musical Instruments	14,751	6,671	755	1,348	46	..	23,571
XV. Miscellaneous Products	711,868	1,016,211	37,064	42,141	35,839	12,808	1,855,931
Total, Classes I. to XV.	58,362,840	44,464,416	15,884,167	14,749,658	5,996,751	4,481,031	143,938,863
XVI. Heat, Light and Power	14,197,790	14,072,978	2,806,374	4,268,297	2,510,954	3,749,684	41,606,077
Grand Total ..	72,560,630	58,537,394	18,690,541	19,017,955	8,507,705	8,230,715	185,544,940

(*a*) Includes estimated value of rented plant.

4. **Depreciation of Land and Buildings and Plant and Machinery.**—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State during the year 1945–46 as recorded by factory proprietors at the annual census of factory production.

ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS AND PLANT AND MACHINERY, 1945–46.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
	£	£	£	£	£	£	£
I. Treatment of Non-metalliferous Mine and Quarry Products	451,784	116,085	39,659	22,252	6,815	21,826	658,421
II. Bricks, Pottery, Glass, etc.	220,440	81,350	13,626	17,529	10,309	1,256	344,510
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .	770,090	542,849	31,163	203,344	85,336	7,964	1,640,746
IV. Industrial Metals, Machines, Implements and Conveyances ..	3,021,779	1,299,102	300,645	606,033	120,021	135,074	5,482,654
V. Precious Metals, Jewellery and Plate	9,965	11.863	660	2,019	949	97	25.553
VI. Textiles and Textile Goods	331,108	625,905	11,954	65,720	12,694	33,261	1,080,642
VII. Skins and Leather ..	58,279	60,570	12,071	20,136	9,591	9,269	169,916
VIII. Clothing	194,922	184,428	15,455	19,094	13,047	3,755	430 701
IX. Food, Drink and Tobacco ..	999,181	883,577	722,220	223,138	153,970	73,931	3,056,017
X. Woodworking and Basketware ..	212,296	125,403	79,206	39,206	46,223	39,522	541,856
XI. Furniture, Bedding, etc.	28,723	18,837	9,489	7,157	5,516	1,406	71,128
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	360,897	401,430	67,692	78,203	18,990	133,470	1,060,682
XIII. Rubber	143,037	173,516	8,216	4,682	1,808	1,479	332,738
XIV. Musical Instruments	2,022	216	86	122	5	..	2,451
XV. Miscellaneous Products	87,151	121,432	2,852	6,342	4,872	1,566	224,215
Total, Classes I. to XV.	6,891,674	4,646,563	1,314,994	1,314,977	490,146	463,876	15,122,230
XVI. Heat, Light and Power	1,196,078	229,747	208,301	235,560	78,081	64,008	2,011,775
Grand Total ..	8,087,752	4,876,310	1,523,295	1,550,537	568,227	527,884	17,134,005

In the following table particulars are given of the recorded values of land and buildings and plant and machinery in use by factories in Australia as at 30th June of the years 1939 and 1943 to 1946 and the value of additions and replacements made and depreciation allowed during each year.

VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY : AUSTRALIA.

Year.	Book Values as at 30th June.(*a*)		Additions and Replacements during year.		Depreciation allowed during year.	
	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1938–39 ..	130,920	143,662	5,578	17,781	1,911	8,736
1942–43 ..	167,594	176,965	12,996	19,262	2,729	15,603
1943–44 ..	177,147	180,993	9,741	19,544	3,532	17,275
1944–45 ..	182,580	183,917	5,020	17,780	2,978	15,808
1945–46 ..	186,939	185,545	6,245	21,766	2,537	14,597

(*a*) Includes estimated value of rented premises and machinery.

§ 9. Individual Industries.

1. **General.**—The preceding pages afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one to two establishments of a particular industry in a State, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

2. **Cement (Portland) and Cement Goods.**—(i) *Details for each State.* The manufacture of portland cement and cement goods is an important industry included in Class I. and details for each State during 1945–46 are given in the following table :—

CEMENT (PORTLAND) AND CEMENT GOODS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	51	41	21	16	16	7	152
Number of persons engaged	..	1,981	1,011	644	440	314	192	4,582
Value of land and buildings	£	680,462	365,801	153,410	93,015	34,737	136,170	1,463,595
Value of plant and machinery	£	748,765	571,250	221,644	304,547	91,645	66,903	2,004,754
Salaries and wages paid	£	585,901	286,854	194,739	138,909	83,666	43,653	1,333,722
Value of power, fuel, etc., used	£	206,774	128,038	82,811	84,825	47,864	42,527	592,839
Value of materials used	£	1,093,431	512,174	439,731	232,321	138,206	82,666	2,498,529
Total value of output	£	2,351,085	1,296,952	917,636	550,247	315,033	237,191	5,668,144
Value of production ..	£	1,050,880	656,740	395,094	233,101	128,963	111,998	2,576,776

(ii) *Total for Australia.* By reason of a change in classification in 1945–46, it is now possible to publish separate details for each of the two groups indicated above, viz. :— manufacture of portland cement and production of cement products. Particulars for each group are shown for 1945–46 in the following table.

CEMENT (PORTLAND) AND CEMENT GOODS : AUSTRALIA, 1945–46.

Items.		Cement (Portland).	Cement Goods.	Total.
Number of factories	..	10	142	152
Number of persons engaged ..	..	1,510	3,072	4,582
Value of land and buildings ..	£	933,561	530,034	1,463,595
Value of plant and machinery ..	£	1,542,773	461,981	2,004,754
Salaries and wages paid	£	461,671	872,051	1,333,722
Value of power, fuel, etc., used ..	£	544,352	48,487	592,839
Value of materials used	£	918,832	1,579,697	2,498,529
Total value of output	£	2,543,816	3,124,328	5,668,144
Value of production	£	1,080,632	1,496,144	2,576,776
Cement, portland grey, produced ..	ton	723,348	..	723,348
	£	2,486,306	..	2,486,306

3. **Chemicals, Drugs and Medicines.**—In 1945–46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations which previously had been combined. Details for each of these industries are given in the next two tables for 1945–46.

INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	..	77	47	12	4	5	2	147
Number of persons engaged	..	2,598	1,616	183	432	164	23	5,016
Value of land and buildings	£	1,173,129	571,805	48,324	(a)	(a)	(a)	2,188,040
Value of plant and machinery	£	1,653,323	1,006,232	64,837	(a)	(a)	(a)	3,410,401
Salaries and wages paid	£	926,556	570,604	51,762	(a)	(a)	(a)	1,750,604
Value of power, fuel, etc., used	£	221,789	117,839	14,545	(a)	(a)	(a)	458,996
Value of materials used	£	2,461,635	1,591,869	89,604	(a)	(a)	(a)	4,406,964
Total value of output	£	4,794,502	2,970,628	229,420	(a)	(a)	(a)	8,820,483
Value of production ..	£	2,111,078	1,260,920	125,271	(a)	(a)	(a)	3,954,523

(*a*) Not available for publication ; included with total for Australia.

PHARMACEUTICAL AND TOILET PREPARATIONS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	142	48	4	10	8	3	215
Number of persons engaged	..	3,008	1,730	101	525	128	22	5,514
Value of land and buildings	£	934,413	426,781	23,439	(a)	(a)	(a)	1,534,058
Value of plant and machinery	£	222,062	291,255	4,936	(a)	(a)	(a)	598,484
Salaries and wages paid	£	700,899	414,543	21,168	(a)	(a)	(a)	1,278,233
Value of power, fuel, etc., used	£	25,249	17,279	473	(a)	(a)	(a)	56,780
Value of materials used	£	2,826,805	1,930,945	55,702	(a)	(a)	(a)	5,402,730
Total value of output	£	6,035,652	3,226,080	97,759	(a)	(a)	(a)	10,249,317
Value of production ..	£	3,183,598	1,277,856	41,584	(a)	(a)	(a)	4,789,807

(*a*) Not available for publication ; included with total for Australia.

4. **White Lead, Paint and Varnish.**—(i) *Details for each State.* The following table shows particulars of this industry for each State during 1945–46 :—

WHITE LEAD, PAINT AND VARNISH FACTORIES, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	58	42	5	13	3	1	122
Number of persons engaged	..	2,180	678	69	236	28	6	3,197
Value of land and buildings	£	616,016	241,018	11,538	87,802	(a)	(a)	973,166
Value of plant and machinery	£	320,897	131,979	14,488	48,749	(a)	(a)	524,065
Salaries and wages paid	£	721,122	192,117	21,235	60,019	(a)	(a)	1,005,121
Value of power, fuel, etc., used	£	61,366	13,256	1,067	4,480	(a)	(a)	80,675
Value of materials used	£	3,072,433	1,060,878	165,188	390,678	(a)	(a)	4,775,075
Total value of output	£	4,776,482	1,624,138	234,183	551,911	(a)	(a)	7,304,167
Value of production ..	£	1,642,683	550,004	67,928	156,753	(a)	(a)	2,448,417

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Total for Australia.* The next table gives particulars for the years 1942–43 to 1945–46 compared with 1938–39 :—

WHITE LEAD, PAINT AND VARNISH FACTORIES : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	..	102	110	111	113	122
Number of persons engaged	..	2,271	2,169	2,350	2,501	3,197
Value of land and buildings	£	761,345	828,790	897,777	936,927	973,166
Value of plant and machinery	£	324,222	368,410	415,552	459,252	524,065
Salaries and wages paid	£	535,014	648,455	727,843	792,437	1,005,121
Value of power, fuel, etc., used	£	44,992	58,080	66,262	70,274	80,675
Value of materials used ..	£	2,275,027	3,180,267	3,943,679	4,465,958	4,775,075
Total value of output ..	£	3,905,104	4,844,646	5,931,990	6,694,321	7,304,167
Value of production	£	1.585,085	1,606,299	1,922,049	2,158,089	2,448,417

5. **Soap and Candle Factories.**—(i) *Details for each State.* The following table gives particulars of soap and candle factories in each State for 1945–46 :—

SOAP AND CANDLE FACTORIES, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	40	16	8	5	2	2	73
Number of persons engaged	..	1,721	738	308	173	61	19	3,020
Value of land and buildings	£	376,634	185,865	37,268	53,429	(a)	(a)	676,405
Value of plant and machinery	£	161,333	151,597	19,051	28,066	(a)	(a)	372,940
Salaries and wages paid	£	495,275	213,617	83,793	45,945	(a)	(a)	860,354
Value of power, fuel, etc., used	£	50,061	58,771	6,414	4,667	(a)	(a)	123,250
Value of materials used	£	1,686,739	905,628	232,739	131,583	(a)	(a)	3,051,046
Total value of output	£	3,408,769	1,613,919	425,757	202,795	(a)	(a)	5.801,953
Value of production ..	£	1,671,969	649,520	186,604	66,545	(a)	(a)	2,627,657

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Total for Australia.* The next table gives similar particulars for the years 1942–43 to 1945–46 compared with 1938–39 :—

SOAP AND CANDLE FACTORIES : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	..	65	66	65	67	73
Number of persons engaged	..	2,620	3,084	2,938	2,906	3,020
Value of land and buildings	£	665,546	691,066	686,091	675,578	676,405
Value of plant and machinery	£	576,732	461,918	422,467	376,788	372,940
Salaries and wages paid	£	501,174	802,011	805,919	779,341	860,354
Value of power, fuel, etc., used	£	76,283	147,061	139,713	126,739	123,250
Value of materials used	£	1,567,999	2,979,650	2,757,710	2,853,368	3,051,046
Total value of output ..	£	3,529,723	6,116,396	5,290,607	5,464,765	5 801,953
Value of production ..	£	1,885,441	2,089,685	2,393,184	2,484,658	2,627,657

(iii) *Raw Materials Used and Production.* The following statement shows the quantities of certain raw materials used and the production in soap and candle factories in Australia for the years 1942–43 to 1945–46 compared with 1938–39 :—

SOAP AND CANDLE FACTORIES : RAW MATERIALS USED AND PRODUCTION, AUSTRALIA.

Particulars.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Tallow used	cwt.	535,511	1,053,412	856,031	859,109	834,057
Alkali used	,,	229,881	233,856	201,992	203,697	160,304
Cocoa-nut oil used—refined and unrefined	,,	138,954	86,367	74,915	79,299	86,576
Soap made	,,	986,087	1,355,708	966,982	898,489	968,792
Candles made	,,	27,459	43,788	38,291	23,159	23,194

The output for the year 1945–46 comprised the following quantities of soap :—household, 622,009 cwt. ; toilet, 232,468 cwt. ; sand, 56,494 cwt. ; soft, 10,591 cwt. ; and industrial, 47,230 cwt. This excludes 12,090 cwt. of soap made in establishments not classified as Soap and Candle Factories.

6. **Chemical Fertilizers.**—(i) *Details for each State.* The following table gives particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1945–46. Details of the consumption, imports and exports of fertilizers will be found in Chapter XX. " Agricultural Production ".

CHEMICAL FERTILIZERS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		6	8	6	7	6	5	38
Number of persons engaged ..		327	1,179	131	742	699	49	3,127
Value of land and buildings	£	111,425	465,131	68,630	342,110	546,431	38,221	1,571,948
Value of plant and machinery	£	113,074	655,372	81,095	705,604	838,685	15,538	2,409,368
Salaries and wages paid	£	121,735	419,340	43,299	248,476	240,471	17,954	1,091,275
Value of power, fuel, etc., used	£	12,405	59,758	1,828	31,774	74,431	1,222	181,418
Value of materials used	£	902,112	2,888,304	364,293	1,435,246	2,056,935	251,603	7,898,493
Total value of output	£	1,189,003	3,676,922	468,653	1,855,868	2,585,219	271,045	10,046,710
Value of production ..	£	274,486	728,860	102,532	388,848	453,853	18,220	1,966,799

(ii) *Total for Australia.* The development of this industry since 1938–39 is set out hereunder :—

CHEMICAL FERTILIZERS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	36	34	36	38	38
Number of persons engaged ..	..	2,540	1,667	1,818	2,452	3,127
Value of land and buildings ..	£	1,449,157	1,464,411	1,454,051	1,468,653	1,571,948
Value of plant and machinery ..	£	2,352,819	2,176,426	2,244,501	2,365,895	2,409,368
Salaries and wages paid ..	£	601,477	539,955	632,115	872,466	1,091,275
Value of power, fuel, etc., used ..	£	113,749	75,104	86,876	122,215	181,418
Value of materials used	£	3,231,053	2,945,694	3,659,176	5,938,073	7,898,493
Total value of output	£	4,944,800	3,923,806	4,867,464	7,700,895	10,046,710
Value of production	£	1,599,998	903,008	1,121,412	1,640,607	1,966,799

7. **Iron and Steel Works and Engineering.**—(i) *General.* In 1945–46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of boilers, engines, machines including machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers not elsewhere included.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel, including Foundries (Ferrous).* In the following table particulars are given for 1945–46 for each State for those industries included under the groups Smelting, Converting, Refining and Rolling of Iron and Steel and Foundries (Ferrous). It is not possible to show separate details for each group without contravening the confidential clause of the Census and Statistics Act.

SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL (INCLUDING FOUNDRIES (FERROUS)), 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	76	222	9	18	14	..	339
Number of persons engaged	..	10,456	3,867	376	603	455	..	15,757
Value of land and buildings	£	2,060,673	681,795	37,007	341,560	63,702	..	3,184 737
Value of plant and machinery	£	5,067,113	570,655	49,130	529 098	72 276	..	6,288,272
Salaries and wages paid	£	4,130,640	1,207,679	133,220	163,558	140,550	..	5,775,647
Value of power, fuel, etc., used	£	2,525,899	165,456	7,404	216,161	23,153	..	2,938,073
Value of materials used	£	19,059,865	966,935	108,793	104,742	103,443	..	20,343,778
Total value of output	£	28,999,164	2,790,706	342,577	547,984	335,761	..	33,016,192
Value of production ..	£	7,413,400	1,658,315	226,380	227,081	209,165	..	9,734,341

(iii) *Plant, Equipment and Machinery including Machine Tools.* In the next table particulars are given for 1945–46 for those industries included in the third group mentioned above.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS), 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	573	315	56	45	49	..	1,038
Number of persons engaged	..	23,966	14,720	2,546	3,243	1,648	..	46,123
Value of land and buildings	£	4,012,690	2,410,725	275,190	262,303	265,817	..	7,226,725
Value of plant and machinery	£	3,521,880	2,577,135	270,001	376,699	299,917	..	7,045,632
Salaries and wages paid	£	7,497,968	4,622,060	736,736	934,698	467,122	..	14,258,584
Value of power, fuel, etc., used	£	292,776	208,117	37,694	44,449	22,145	..	605,181
Value of materials used	£	8,248,715	5,914,156	610,682	1,112,050	568,856	..	16,454,459
Total value of output	£	19,486,008	13,154,372	1,651,834	2,540,116	1,271,617	..	38,103,947
Value of production ..	£	10,944,517	7,032,099	1,003,458	1,383,617	680,616	..	21,044,307

(iv) *Other Engineering.* Details covering jobbing and general engineering works are given for each State for 1945–46 in the following table.

OTHER ENGINEERING, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	357	344	47	105	72	38	963
Number of persons engaged	..	2,298	6,516	521	2,681	439	657	13,112
Value of land and buildings	£	569,531	1,195,642	90,442	310,772	88,446	114,466	2,360,299
Value of plant and machinery	£	318,506	1,145,793	47,135	384,015	62,300	132,871	2,090,620
Salaries and wages paid	£	526,959	1,970,270	142,181	701,989	106,179	186,221	3,633,799
Value of power, fuel, etc., used	£	26,650	79,256	5,780	34,506	6,872	8,464	161,528
Value of materials used	£	574,879	2,026,670	142,863	631,083	95,728	127,600	3,508,823
Total value of output	£	1,526,448	5,028,087	348,765	1,643,945	269,784	375,729	9,192,758
Value of production ..	£	924,919	2,922,161	200,122	978,356	167 184	239,665	5,432,407

8. Extracting and Refining of Other Metals; Alloys.—(i) *Details for each State.* The following table gives particulars of metal extraction and ore reduction works, other than those connected with iron and steel. The returns exclude ore reduction works operating at mines.

EXTRACTING AND REFINING OF OTHER METALS ; ALLOYS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust. (a)	Tas.	Australia
Number of factories ..	..	17	18	8	2	..	4	49
Number of persons engaged	..	1,372	183	827	1,423	..	2,255	6,060
Value of land and buildings	£	283,111	(b)	282,233	(b)	..	641,896	1,384,721
Value of plant and machinery	£	1,152,054	(b)	865,011	(b)	..	1,162,529	3,795,038
Salaries and wages paid	£	506,885	(b)	285,407	(b)	..	783,051	2,279,972
Value of power, fuel, etc., used	£	257,870	(b)	73,255	(b)	..	329,903	1,057,934
Value of materials used	£	7,903,321	(b)	1,099,128	(b)	..	2,344,246	18,042,070
Total value of output	£	10,113,113	(b)	1,993,580	(b)	..	4,486,328	24,626,910
Value of production ..	£	1,951,922	(b)	821,197	(b)	..	1,812,179	5,526,906

(a) In Western Australia the majority of the plants are worked on the mines and are therefore not included. (b) Not available for publication ; figures are included in the total for Australia.

(ii) *Total for Australia.* The development of this industry since 1938–39 is set out hereunder :—

EXTRACTING AND REFINING OF OTHER METALS ; ALLOYS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46
Number of factories ..	.. ..	42	41	43	40	49
Number of persons engaged	.. ..	5,532	6,632	6,321	5,885	6,060
Value of land and buildings	.. £	1,177,348	1,374,230	1,358,722	1,359,548	1,384,721
Value of plant and machinery	.. £	3,525,659	4,080,282	3,930,910	3,816 583	3,795,038
Salaries and wages paid	.. £	1,613,107	2,276,458	2,291,782	2,173,352	2,279,972
Value of power, fuel, etc., used	.. £	597,951	849,979	788,797	1,033,829	1,057,934
Value of materials used	.. £	16,844,310	17,669,490	17,755,594	16,567,693	18,042,070
Total value of output ..	.. £	21,333,872	23,661,486	23,513,675	22,750,733	24,626,910
Value of production ..	.. £	3,891,611	5,142,017	4,969,284	5,149,211	5,526,906

9. **Electrical Machinery, Cables and Apparatus.**—(i) *Details for Each State.* The following table shows particulars of this industry for each State during 1945–46 :—

ELECTRICAL MACHINERY, CABLES AND APPARATUS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	271	172	24	39	36	9	551
Number of persons engaged	..	14,645	6,399	469	769	459	84	22,825
Value of land and buildings	£	2,148,893	933,375	79,810	247,111	79,233	18,953	3,507,375
Value of plant and machinery	£	1,364,449	589,418	34,386	61,450	25,588	8,727	2,084,018
Salaries and wages paid	£	4,123,425	1,749,827	127,533	169,368	110,761	20,121	6,301,035
Value of power, fuel, etc., used	£	135,325	58,102	3,155	7,745	3,474	928	208,729
Value of materials used	£	5,159,170	2,364,669	171,860	215,239	133,817	40,688	8,085,443
Total value of output	£	11,522,910	5,045,516	373,121	461,310	308,314	78,658	17,789,829
Value of production ..	£	6,228,415	2,622,745	198,106	238,326	171,023	37,042	9,495,657

(ii) *Total for Australia.* The increased output of electrical energy in Australia within recent years, referred to in par. 40 below, caused a corresponding demand for electrical equipment. Difficulties, due to war, in obtaining electrical equipment from abroad have been responsible for considerable development in the manufacture of electrical goods and equipment in Australia, as shown in the following table.

ELECTRICAL MACHINERY, CABLES AND APPARATUS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	.. ..	360	401	431	475	551
Number of persons engaged	.. ..	10,666	19,442	20,659	21,669	22,825
Value of land and buildings	.. £	1,627,183	2,442,968	2,713,999	2,829,443	3,507,375
Value of plant and machinery	.. £	896,553	1,600,093	1,724,045	1,806,169	2,084,018
Salaries and wages paid	.. £	2,031,098	5,280,102	5,710,782	5,857,210	6,301,035
Value of power, fuel, etc., used	.. £	104,594	186,983	193,542	190,677	208,729
Value of materials used ..	.. £	3,195,032	7,788,397	7,804,575	7,991,641	8,085,443
Total value of output ..	.. £	6,954,498	15,875,437	16,346,709	16,892,366	17,789,829
Value of production ..	.. £	3,654,872	7,900,057	8,348,592	8,710,048	9,495,657

10. **Railway and Tramway Workshops.**—(i) *Details for each State*, 1945–46. The railway and tramway workshops which form an important item in Class IV. are chiefly State-owned institutions and their development is a reflection of the growth of the railway and tramway systems of Australia. The following table includes, in addition, municipal establishments for manufacturing and repairing rolling stock. Private institutions numbering 10 in 1945–46 have been excluded :—

TRAMCARS, RAILWAY ROLLING STOCK AND CARRIAGES, ETC.(*a*), 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	..	36	25	11	14	22	7	115
Number of persons engaged	..	15,681	7,262	5,282	5,285	2,613	839	36,962
Value of land and buildings	£	3,246,576	1,487,546	557,175	1,055,734	518,822	94,638	6,960,491
Value of plant and machinery	£	3,013,916	1,116,680	441,016	953,032	458,847	51,008	6,034,499
Salaries and wages paid	£	4,831,165	2,344,878	1,827,188	1,610,395	801,577	241,515	11,656,718
Value of power, fuel, etc., used	£	140,755	68,369	41,979	75,321	35,272	10,169	371,865
Value of materials used	£	3,585,005	1,823,103	1,118,797	923,976	621,189	71,276	8,143,346
Total value of output	£	9,465,324	4,525,198	3,310,325	2,870,662	1,782,038	355,256	22,308,803
Value of production ..	£	5,739,564	2,633,726	2,149,549	1,871,365	1,125,577	273,811	13,793,592

(*a*) Government and municipal only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

(ii) *Total for Australia.* The following table shows the development of railway and tramway workshops in Australia since 1938–39 :—

TRAMCARS, RAILWAY ROLLING STOCK AND CARRIAGES, ETC.(*a*) : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	117	114	116	116	115
Number of persons engaged ..	..	27,310	38,721	39,058	37,972	36,962
Value of land and buildings ..	£	6,736,924	6,765,186	6,902,264	6,911,284	6,960,491
Value of plant and machinery	£	5,390,179	5,684,696	5,707,808	5,824,728	6,034,499
Salaries and wages paid ..	£	6,720,990	12,943,437	13,407,931	12,463,846	11,656,718
Value of power, fuel, etc., used	£	226,108	451,527	454,130	418,288	371,865
Value of materials used	£	4,976,353	7,731,445	8,590,203	8,056,849	8,143,346
Total value of output ..	£	13,223,114	23,490,587	24,947,557	23,099,306	22,308,803
Value of production	£	8,020,653	15,307,615	15,903,224	14,624,169	13,793,592

(*a*) Government and Municipal only.

11. **Motor Vehicles.**—The industries catering for the motor trade are included in Class IV. "Industrial Metals, Machines and Conveyances". In the table below a summary is given of the principal statistics for 1945–46 for each branch of industry associated with the motor trade of Australia.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC. : AUSTRALIA, 1945–46.

Items.		Construction and Assembly.	Body Building.	Repairs.	Accessories.	Total.
Number of factories	..	42	212	3,230	108	3,592
Number of persons engaged ..	..	4,077	10,682	21,012	3,935	39,706
Value of land and buildings ..	£	1,042,157	1,635,292	6,555,724	644,787	9,877,960
Value of plant and machinery ..	£	468,264	1,149,305	1,661,219	478,784	3,757,572
Salaries and wages paid ..	£	1,346,248	3,298,350	4,790,367	1,147,049	10,582,014
Value of power, fuel, etc., used ..	£	51,910	87,707	195,504	59,603	394,724
Value of materials used	£	2,207,317	3,151,005	5,301,402	1,183,549	12,143,273
Total value of output	£	4,042,078	7,579,250	13,337,929	3,097,050	28,356,307
Value of production	£	1,782,851	4,340,538	7,841,023	1,853,898	15,818,310

In the next table similar details are shown on a State basis for these branches combined.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas. (a)	Australia
Number of factories	1,348	1,125	418	220	342	139	3,592
Number of persons engaged ..	11,069	14,304	4,312	7,024	2,043	954	39,706
Value of land and buildings £	3,651,528	3,585,520	712,017	926,815	667,429	334,651	9,877,960
Value of plant and machinery £	940,314	1,636,123	258,874	665,545	195,455	61,261	3,757,572
Salaries and wages paid £	2,696,270	4,070,174	1,040,653	2,063,938	501,984	208,995	10,582,014
Value of power, fuel, etc., used £	115,465	149,416	41,130	59,828	23,677	5,208	394,724
Value of materials used £	3,519,661	4,999,858	1,091,694	1,711,837	614,993	205,230	12,143,273
Total value of output £	7,802,179	11,645,782	2,801,580	4,089,914	1,488,719	528,133	28,356,307
Value of production . £	4,167,053	6,496,508	1,668,756	2,318,249	850,049	317,695	15,818,310

(a) Includes horse-drawn vehicles.

The table below shows the output of motor bodies together with the number imported into Australia for 1938–39 and the years 1941–42 to 1945–46 :—

MOTOR BODIES : PRODUCTION AND IMPORTS, AUSTRALIA.

Items.		1938–39.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Motor Bodies—							
Number made ..	No.	79,436	62,731	44,286	29,309	22,805	19,473
Value	£	6,421,142	4,321,988	4,652,771	2,582,912	2,530,043	2,356,778
Number imported	No.	532	16	270	694	6	223
Value	£A	70,943	2,261	71,405	66,175	1,423	37,410

In the next table particulars are given of the number and value of motor chassis imported into Australia for the years shown.

MOTOR CHASSIS : IMPORTS, AUSTRALIA.

Items.		1938–39.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.
Number imported ..	No.	76,094	35,696	14,547	9,186	6,660	10,113
Value	£A	8,037,228	5,945,180	4,456,808	3,186,885	3,464,820	2,064,478

12. **Agricultural Machines and Implements.**—(i) *General.* The manufacture of agricultural implements is an important branch of industry in Australia because of the extensive agricultural activities. The articles manufactured include a wide range of implements for tillage, seeding and planting and the harvesting of crops. Other farm machinery made includes oil engines, windmills, chaff-cutters and machinery used in the dairying industry.

(ii) *Details for States.* The following table gives details of agricultural implement works in each State for 1945–46 :—

AGRICULTURAL MACHINES AND IMPLEMENTS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories	57	57	15	34	9	..	172
Number of persons engaged ..	1,758	4,905	1,236	1,449	162	..	9,510
Value of land and buildings £	292,452	609,043	87,577	164,909	45,971	..	1,199,952
Value of plant and machinery £	189,547	719,690	114,276	197,193	8,891	..	1,229,597
Salaries and wages paid £	517,994	1,584,777	344,680	399,801	46,640	..	2,893,892
Value of power, fuel, etc., used £	21,252	120,141	16,493	27,420	844	..	186,150
Value of materials used £	415,819	1,568,582	257,882	450,972	24,047	..	2,717,302
Total value of output £	1,193,569	3,747,487	707,503	967,334	85,451	..	6,701,344
Value of production .. £	756,498	2,058,764	433,128	488,942	60,560	..	3,797,892

(iii) *Total for Australia.* Comparative statistics for 1938–39 and the years 1942–43 to 1945–46 are given hereunder :—

AGRICULTURAL MACHINES AND IMPLEMENTS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	161	144	145	146	172
Number of persons engaged ..	..	6,563	9,457	9,178	9,149	9,510
Value of land and buildings ..	£	996,949	1,037,513	1,046,702	1,035,331	1,199,952
Value of plant and machinery ..	£	910,520	1,093,853	1,121,626	1,265,985	1,229,597
Salaries and wages paid ..	£	1,373,213	2,954,294	2,821,968	2,745,909	2,893,892
Value of power, fuel, etc., used ..	£	81,736	215,379	198,680	187,970	186,150
Value of materials used ..	£	1,485,018	2.762,748	2,822,460	2,817,698	2,717,302
Total value of output	£	3,403,091	6,727,818	6,604,402	6,589,942	6,701,344
Value of production	£	1,836,337	3,749,691	3,583,262	3,584,274	3,797,892

13. **Wireless and Amplifying Apparatus.**—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930–31 a new classification of factories was adopted and " Wireless Apparatus " was shown as a separate industry. The industry is confined almost entirely to New South Wales and Victoria. The number of broadcast listeners' licences increased from 331,128 in 1930–31 to 1,506,180 in 1945–46 and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services but there was a recession in output in 1945–46.

WIRELESS AND AMPLIFYING APPARATUS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	72	73	85	89	97
Number of persons engaged ..	..	4,828	9,554	11,020	10,534	8,709
Value of land and buildings ..	£	557,953	754,977	895,642	998,470	969,105
Value of plant and machinery ..	£	305,468	544,023	613,088	643,914	711,805
Salaries and wages paid ..	£	754,302	2,429,430	2,959,291	2,784,985	2,295,866
Value of power, fuel, etc., used ..	£	23,525	58,517	68,553	70,055	58,240
Value of materials used	£	1,355,683	2,944,653	3,379,511	3,445,575	3,446,056
Total value of output	£	2.502,338	6,180,276	7,190,028	7,290,352	6,514,935
Value of production	£	1,123,130	3,177,106	3,741,964	3,774,722	3,010,639

The number of domestic receiving sets assembled in 1945–46 was 93,048 and the number of domestic chassis made was 76,587 compared with 163,821 and 123,655 respectively in 1938–39.

14. **Cotton.**—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938–39 was 18 million lb. and slightly under 14 million lb. in the five years ended 1945–46. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop, but since the commencement of the Pacific War there has been a definite downward trend. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XX. " Agricultural Production ".

(ii) *Ginning.* The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly from India and the United States of America.

(iii) *Spinning and Weaving.* The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New factories have been established and Australia is now producing an extensive range of cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are given in the following table for the four years ended 1945–46 in comparison with 1938–39.

COTTON SPINNING AND WEAVING : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	.. ..	33	69	70	74	78
Number of persons engaged	.. ..	3,589	7,868	7,908	7,667	7,253
Value of land and buildings	.. £	703,790	1,396,304	1,427,401	1,523,800	1,529,150
Value of plant and machinery	.. £	735,529	2,177,698	2,080,785	2,170,792	1,913,775
Salaries and wages paid	.. £	493,109	1,655,233	1,768,268	1,732,481	1,714,669
Value of power, fuel, etc., used	.. £	50,011	133,138	142,534	146,726	149,990
Value of materials used ..	.. £	1,357,280	4,547,556	5,375,438	5,370,733	4,559,560
Total value of output ..	.. £	2,385,990	7,691,120	8,930,324	8,879,653	7,936,716
Value of production ..	.. £	978,699	3,010,426	3,412,352	3,362,194	3,227,166

15. **Woollen Mills.**—(i) *Details for each State.* The importance of this industry is emphasized by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed, worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. The following table gives particulars for 1945–46 :—

WOOLLEN MILLS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories	37	65	3	3	1	5	114
Number of persons engaged ..	6,801	11,094	677	577	176	2,211	21,536
Value of land and buildings £	1,085,639	1,600,950	(*a*)	39,668	(*a*)	224,590	3,028,060
Value of plant and machinery £	1,150,183	1,410,896	(*a*)	70,046	(*a*)	162,675	2,925,811
Salaries and wages paid £	1,655,356	2,855,086	(*a*)	139,082	(*a*)	507,197	5,324,388
Value of power, fuel, etc., used £	144,693	287,645	(*a*)	22,692	(*a*)	36,951	511,416
Value of materials used £	3,994,650	6,564,947	(*a*)	351,735	(*a*)	1,141,395	12,314,413
Total value of output £	6,884,484	11,752,967	(*a*)	600,012	(*a*)	2,002,206	21,776,979
Value of production .. £	2,745,141	4,900,375	(*a*)	225,585	(*a*)	823,860	8,951,150

(*a*) Not available for publication ; figures are included in total for Australia.

(ii) *Total for Australia.* The extent of the woollen mill industry in Australia in the years 1942–43 to 1945–46 compared with 1938–39 is shown in the following table Detailed particulars for the several States are not available for publication.

WOOLLEN MILLS : AUSTRALIA.

Items.		1938–39. (*a*)	1942–43. (*a*)	1943–44. (*a*)	1944–45. (*a*)	1945–46
Number of factories ..	.. ..	90	118	116	122	114
Number of persons engaged	.. ..	19,608	26,436	24,858	23,095	21,536
Value of land and buildings	.. £	2,380,009	2,816,658	2,867,297	2,996,246	3,028,066
Value of plant and machinery	.. £	3,369,517	3,178,704	2,995,835	2,967,911	2,925,811
Salaries and wages paid	.. £	2,887,907	5,967,770	5,896,320	5,484,589	5,324,388
Value of power, fuel, etc., used	.. £	392,537	655,981	658,800	609,139	511,416
Value of materials used ..	.. £	7,331,117	16,604,441	15,455,106	13,780,546	12,314,413
Total value of output ..	.. £	12,514,610	27,335,695	25,433,289	23,250,907	21,776,979
Value of production ..	.. £	4,790,956	10,075,273	9,319,383	8,861,222	8,951,150
Woollen cloth and tweed	.. sq. yd.	8,336,226	14,516,085	13,055,199	12,679,864	16,707,262
Worsted cloth	.. „	17,986,091	23,767,429	19,944,042	17,296,854	12,643,557
Serge	.. „	792,314	1,462,887	1,840,316	1,395,201	1,022,388
Flannel—						
For outer clothing ..	.. „	2,143,835	1,276,814	2,611,476	2,205,174	2,192,849
For underwear (pure)..	.. „	1,557,373	3,813,354	2,704,382	2,020,022	1,566,932
For underwear (mixtures)	.. „	813,530	552,144	218,431	185,630	655,803
Blankets	.. pair	573,795	1,768,557	1,687,729	1,597,395	981,036

(*a*) Includes Wool Scouring Works in Victoria and Tasmania and Wool Scouring Works and Fellmongeries in South Australia.

16. **Hosiery and Other Knitted Goods.**—(i) *Details for each State.* In addition to the woollen mills there were 376 hosiery and knitting mills operating in Australia during 1945–46. The total number of persons engaged in these establishments was 17,091, of whom 12,502 were females. Details for each State are shown in the following table :—

HOSIERY AND OTHER KNITTED GOODS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	104	255	1	7	5	4	376
Number of persons engaged	..	5,049	11,536	211	88	127	80	17,091
Value of land and buildings	£	835,283	1,546,500	(a)	16,040	16,167	(a)	2,444,369
Value of plant and machinery	£	432,830	892,739	(a)	2,916	8,082	(a)	1,358,482
Salaries and wages paid	£	1,086,669	2,501,753	(a)	15,799	20,895	(a)	3,687 445
Value of power, fuel, etc., used	£	41,278	139,026	(a)	580	1,308	(a)	185,159
Value of materials used	£	2,403,706	4,606,556	(a)	23,118	60,817	(a)	7,202,997
Total value of output	£	4,279,576	8,615,732	(a)	51,409	104,935	(a)	13,252,876
Value of production ..	£	1,834,592	3,870,150	(a)	27,711	42,810	(a)	5,864,720

(a) Not available for publication. These figures are included in the total for Australia.

(ii) *Total for Australia.* Comparative statistics for 1938–39 and the years 1942–43 to 1945–46 are shown in the following table :—

HOSIERY AND OTHER KNITTED GOODS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	.. ..	313	326	341	363	376
Number of persons engaged	.. ..	18,159	15,654	16,017	16,691	17,091
Value of land and buildings	.. £	1,962,336	2,172,979	2,243,181	2,354,232	2,444,369
Value of plant and machinery	.. £	1,930,564	1,455,583	1,367,754	1,295,962	1,358,482
Salaries and wages paid	.. £	2,331,536	2,930,842	3,187,545	3,290,370	3,687,445
Value of power, fuel, etc., used	.. £	133,154	164,534	168,218	169,935	185,159
Value of materials used ..	.. £	4,284,216	7,599,088	7,873,375	7,141,525	7,202,997
Total value of output ..	.. £	8,226,468	13,095,997	13,771,177	13,038,366	13,252,876
Value of production ..	.. £	3,809,098	5,332,375	5,729,584	5,726,906	5,864,720

(iii) *Raw Materials used and Production*, 1945–46. The main raw materials consumed in establishments manufacturing hosiery and other knitted goods during 1945–46 consisted of woollen yarn, 8,203,549 lb ; cotton yarn, 5,954,517 lb. ; and rayon yarn, 5,984,051 lb. Production comprised 30,142,339 garments, valued at £6,983,517 ; 1,194,839 dozen pairs of stockings, valued at £2,164,264 ; and 1,692,714 dozen pairs of socks, valued at £1,900,357.

17. **Tanning, Currying and Leather Dressing.**—(i) *Details for each State.* In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

TANNING, CURRYING AND LEATHER DRESSING, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	76	44	14	11	5	2	152
Number of persons engaged	..	1,945	2,257	499	146	154	21	5,022
Value of land and buildings	£	424,259	497,837	51,678	(a)	40,729	(a)	1,048,240
Value of plant and machinery	£	294,795	298,080	61,702	(a)	30,506	(a)	704,551
Salaries and wages paid	£	631,168	778,865	152,560	(a)	46,968	(a)	1,662,156
Value of power, fuel, etc., used	£	49,153	60,094	11,359	(a)	3,909	(a)	127,824
Value of materials used	£	2,214,699	2,142,697	569,530	(a)	170,556	(a)	5,237,697
Total value of output	£	3,293,731	3,430,200	845,379	(a)	263,007	(a)	8,055,696
Value of production ..	£	1,029,879	1,227,409	264,490	(a)	88,542	(a)	2,690,175

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Total for Australia.* The development of the tanning industry during the years 1938–39 to 1945–46 is shown in the following table :—

TANNING, CURRYING AND LEATHER DRESSING : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46
Number of factories	..	132	138	142	147	152
Number of persons engaged ..	..	4,375	4,647	4,631	4,668	5,022
Value of land and buildings ..	£	813,713	906,896	919,016	952,161	1,048,240
Value of plant and machinery ..	£	523,538	531,661	543,796	605,625	704,551
Salaries and wages paid ..	£	919,781	1,453,026	1,495,549	1,520,672	1,662,156
Value of power, fuel, etc., used ..	£	87,670	124,261	135,568	131,818	127,824
Value of materials used ..	£	2,983,041	5,001,880	5,007,149	4,959,660	5,237,697
Total value of output	£	4,592,642	7,461,144	7,569,327	7,552,095	8,055,696
Value of production	£	1,521,931	2,335,003	2,426,610	2,460,617	2,690,175

(iii) *Raw Material Used and Production.* The quantities of raw material used and leather produced in tanneries in each State in 1945–46 are shown in the following table. Some leather is also produced in works other than tanneries, but this is excluded.

TANNERIES : RAW MATERIAL USED AND PRODUCTION, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides.. .. No.	789,430	942,669	310,791	(*a*)	95,577	(*a*)	2,218,114
Skins—							
Calf .. ,,	687,047	699,480	170,096	3,783	1,060	..	1,561,466
Goat .. ,,	731,162	(*a*)	(*a*)	(*a*)	..	..	840,816
Sheep .. ,,	1,638,537	576,619	(*a*)	(*a*)	180	(*a*)	2,506,207
Marsupial .. ,,	30,782	26,239	(*a*)	(*a*)	(*a*)	..	67,926
Pelts treated ,,	1,529,887	462,330	..	..	1,560	..	1,993,777
Bark used—							
Wattle .. tons	3,314	4,854	1,936	(*a*)	(*a*)	(*a*)	11,036
Other .. ,,	588	911	(*a*)	..	(*a*)	..	1,922
Tanning extract used lb.	12,328,159	8,535,861	3,401,346	(*a*)	1,921,559	(*a*)	26,404,544
Leather made—							
Sole and Belting ,,	11,753,271	13,039,543	6,774,438	866,790	(*a*)	(*a*)	34,790,814
Harness .. ,,	763,862	533,430	580,762	50,041	30,922	..	1,959,017
Upholstery .. sq. ft.	3,835,039	(*a*)	..	(*a*)	..	..	5,877,062
Dressed and Upper from Hides—							
Sold by Measurement—							
Patent sq. ft.	1,281,945	1,177,753	..	..	..	..	2,459,698
All Other ,,	10,123,522	14,911,458	3,868,158	1,411,838	(*a*)	(*a*)	31,035,897
Sold by Weight—							
Waxed Kip lb.	(*a*)	(*a*)	(*a*)	63,362	8,718	(*a*)	106,060
All Other ,,	749,561	864,694	(*a*)	51,914	(*a*)	(*a*)	1,673,343
Dressed from skins—							
Calf .. sq. ft.	5,112,853	5,053,542	(*a*)	(*a*)	(*a*)	..	11,185,486
Goat .. ,,	3,369,440	(*a*)	(*a*)	(*a*)	..	..	3,848,830
Sheep .. ,,	11,588,469	3,009,100	(*a*)	(*a*)	(*a*)	..	15,065,699
Marsupial ,,	77,249	517,662	31,601	3,000	2,503	..	632.015

(*a*) Not available for publication ; figures are included in the total for Australia.

18. **Tailoring and Ready-made Clothing Factories.**—(i) *Details for each State.* Statistics showing the distribution in 1945–46 of this industry between States are shown in the following table :—

TAILORING AND READY-MADE CLOTHING FACTORIES, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	664	388	125	122	96	25	1,420
Number of persons engaged	..	15,167	8,432	2,756	2,223	1,000	469	30,047
Value of land and buildings	£	2,264,241	1,058,076	272,336	315.917	164,767	66,247	4.141.584
Value of plant and machinery	£	443,286	263,292	48,470	40,635	20,136	12,876	828,695
Salaries and wages paid	£	2,796,896	1.675,620	453,417	351.925	150,330	78,426	5,506.614
Value of power, fuel, etc., used	£	53,747	41,520	8,863	7,724	3,409	1,353	116,616
Value of materials used	£	4,689,717	3,566,734	758,193	319,359	203,729	79,069	9,616,801
Total value of output	£	9,198,299	6,403,713	1,535,989	834,629	452,939	188,799	18,614,368
Value of production ..	£	4,454,835	2,795,459	768,933	507,546	245,801	108,377	8,880.951

(ii) *Total for Australia.* Details for the four years 1942–43 to 1945–46 compared with 1938–39 are as follows :—

TAILORING AND READY-MADE CLOTHING FACTORIES : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	1,177	1,101	1,160	1,268	1,420
Number of persons engaged ..	..	26,499	26,043	25,872	28,108	30,047
Value of land and buildings ..	£	3,175,748	3,269,725	3,453,279	3,728,531	4,141,584
Value of plant and machinery ..	£	355,503	506,188	567,800	689,437	828,695
Salaries and wages paid ..	£	3,168,472	4,280,349	4,543,027	4,970,774	5,506,614
Value of power, fuel, etc., used ..	£	72,431	90,722	98,915	104,945	116,616
Value of materials used ..	£	4,946,519	9,207,864	8,843,064	9,416,961	9,616,801
Total value of output	£	9,830,646	15,855,802	16,189,527	17,588,937	18,614,368
Value of production	£	4,811,696	6,557,216	7,247,548	8,067,031	8,880,951

19. **Dressmaking, Hemstitching and Millinery Establishments.**—(i) *Details for each State.* Particulars of dressmaking (including hemstitching) and millinery establishments are given separately in the following tables for 1945–46.

DRESSMAKING, HEMSTITCHING ESTABLISHMENTS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas. (a)	Australia.
Number of factories ..	..	154	483	43	65	63	11	819
Number of persons engaged	..	1,856	9,880	903	1,180	1,113	105	15,037
Value of land and buildings	£	264,916	1,513,003	80,902	115,877	136,486	14,594	2,125,778
Value of plant and machinery	£	29,580	195,433	19,122	23,094	27,498	2,705	297,432
Salaries and wages paid	£	262,865	1,782,477	125,448	153,715	134,801	13,536	2,472,842
Value of power, fuel, etc., used	£	3,145	31,669	2,245	3,145	2,424	364	42,992
Value of materials used	£	265,295	3,487,894	138,967	142,308	183,923	13,552	4,231,939
Total value of output	£	682,012	6,408,703	348,252	383,678	417,841	36,376	8,276,862
Value of production ..	£	413,572	2,889,140	207,040	238,225	231,494	22,460	4,001,931

(a) Includes Millinery.

MILLINERY ESTABLISHMENTS, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas. (a)	Australia.
Number of factories ..	..	79	69	15	13	3	..	179
Number of persons engaged	..	1,265	1,152	365	195	37	..	3,014
Value of land and buildings	£	294,080	231,880	44,309	25,640	1,930	..	597,839
Value of plant and machinery	£	16,406	40,149	6,552	1,438	88	..	64,633
Salaries and wages paid	£	226,202	239,235	63,496	31,240	4,683	..	564,856
Value of power, fuel, etc., used	£	5,143	7,500	954	682	108	..	14,387
Value of materials used	£	420,509	481,919	84,520	51,716	9,830	..	1,048,494
Total value of output	£	874,671	1,006,133	229,287	103,430	17,409	..	2,230,930
Value of production ..	£	449,019	516,714	143,813	51,032	7,471	..	1,168,049

(a) Included in Dressmaking.

(ii) *Total for Australia.* Particulars of dressmaking, hemstitching and millinery establishments in Australia for the four years ended 1945–46 compared with 1938–39 are shown in the following table :—

DRESSMAKING, HEMSTITCHING AND MILLINERY ESTABLISHMENTS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	869	814	838	904	998
Number of persons engaged ..	..	16,398	13,398	13,822	15,604	18,051
Value of land and buildings ..	£	2,051,611	2,029,915	2,140,258	2,335,994	2,723,617
Value of plant and machinery ..	£	189,263	212,289	237,809	279,771	362,065
Salaries and wages paid ..	£	1,652,808	1,913,297	2,134,257	2,436,294	3,037,698
Value of power, fuel, etc., used ..	£	33,067	36,320	39,699	45,088	57,379
Value of materials used ..	£	2,600,363	3,563,197	4,093,738	4,601,884	5,280,433
Total value of output	£	5,234,727	6,869,242	7,874,479	8,806,159	10,507,792
Value of production	£	2,592,297	3,269,725	3,741,042	4,159,187	5,169,980

20. **Shirts, Collars and Underclothing.**—(i) *Details for each State.* Particulars of this industry are shown for 1945–46 in the following table :—

SHIRTS, COLLARS AND UNDERCLOTHING, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	178	108	18	27	16	..	347
Number of persons engaged ..	4,888	3,266	872	478	398	..	9,902
Value of land and buildings £	691,693	482,659	54,333	38,056	44,122	..	1,310,863
Value of plant and machinery £	215,397	132,677	27,860	12,020	8,643	..	396,597
Salaries and wages paid £	873,950	583,571	142,509	72,782	55,701	..	1,728,513
Value of power, fuel, etc., used £	14,525	12,455	2,354	1,445	847	..	31,626
Value of materials used £	2,249,802	1,856,752	149,165	88,008	102,014	..	4,445,741
Total value of output £	3,595,513	2,762,321	336,350	198,901	185,736	..	7,078,821
Value of production .. £	1,331,186	893,114	184,831	109,448	82,875	..	2,601,454

(ii) *Total for Australia.* The following table shows the progress of the industry since 1938–39 :—

SHIRTS, COLLARS AND UNDERCLOTHING : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	283	293	298	320	347
Number of persons engaged ..	..	11,081	9,851	9,716	9,984	9,902
Value of land and buildings ..	£	945,972	1,028,651	1,079,603	1,145,703	1,310,863
Value of plant and machinery ..	£	230,579	259,913	275,596	315,196	396,597
Salaries and wages paid ..	£	1,142,855	1,443,680	1,574,283	1,673,929	1,728,513
Value of power, fuel, etc., used ..	£	23,639	25,858	26,162	27,707	31,626
Value of materials used ..	£	2,650,779	4,353,022	4,874,577	4,968,808	4,445,741
Total value of output	£	4,435,209	6,605.309	7,339,928	7,697,154	7,078,821
Value of production	£	1,760,791	2,226,429	2,439.189	2,700,639	2,601,454

21. **Boot and Shoe Making and Repairing.**—(i) *Boot and Shoe (not Rubber) Factories* The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following table relates to 1945–46 and refers to boot and shoe factories as distinct from those devoted to repairing and bespoke work. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods (Including Tyres made) ; *vide* para. 38.

BOOT AND SHOE (NOT RUBBER) FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories	134	195	22	18	10	4	383
Number of persons engaged ..	6,053	9,464	956	1,180	515	96	18,264
Value of land and buildings £	593,134	742,870	47,417	74,924	53,571	6,395	1,518,311
Value of plant and machinery £	354,487	630.515	76,802	106,764	47,466	6,342	1,222,376
Salaries and wages paid £	1,432,430	2,353,753	222,316	260,456	116,655	22,004	4,407,614
Value of power, fuel, etc., used £	23,682	41,482	3,023	3,990	2,411	320	74,908
Value of materials used £	2,347.191	4,150,012	396,397	390,202	191,861	43,849	7,519,512
Total value of output £	4,437,680	7,765,401	723,572	714,959	350,227	74,542	14,066,381
Value of production .. £	2,066,807	3,573,907	324,152	320,767	155,955	30,373	6,471,961

(ii) *Boot and Shoe Repairing, including Bespoke Work.* The introduction of small power plants in repairing shops brought this class of establishment within the meaning of a factory for statistical purposes. Shops using small power plants are widely distributed throughout Australia, and in 1945–46 numbered 1,477 employing 2,981 persons. The sum of £341,217 was distributed in salaries and wages, and the output was valued at £1,470,103.

(iii) *Quantity and Value of Production.* The number and value of boots, shoes and slippers made at factories in each State are shown for 1945–46 in the following table. Particulars relating to the output of rubber boots and shoes are not included :—

BOOT AND SHOE (NOT RUBBER) FACTORIES OUTPUT, 1945–46.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
QUANTITY.								
Boots and shoes	pairs	5,016,504	7,031,105	692,563	889,683	318,629	93,350	14,041,834
Slippers	,,	2,196,603	3,246,022	674,048	325,418	337,359	. .	6,779,450
Uppers (*b*)	,,	(*a*)	44,916	(*a*)	(*a*)	35,470	(*a*)	89,358
VALUE.								
Boots and shoes	£	3,608,453	5,566,946	472,910	625,446	212,813	67,325	10,553,893
Slippers . .	£	440,738	666,839	176,469	49,280	75,233	. .	1,408,559
Uppers (*b*) . .	£	(*a*)	26,456	(*a*)	(*a*)	2,443	(*a*)	36,500

(*a*) Not available for publication ; figures are included in total for Australia. (*b*) Made for other than factory use.

22. **Flour-milling.**—(i) *Details for States.* The following table shows the position of the grain-milling industry in each State for the year 1945–46.

FLOUR-MILLING, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories . .	.	54	40	10	39	19	8	170
Number of persons engaged	. .	1,403	1,021	424	622	487	142	4,099
Value of land and buildings	£	854,211	688,849	183,664	203,404	239,774	74,079	2,243,981
Value of plant and machinery	£	725,274	497,473	152,318	231,746	198,660	29,955	1,835,426
Salaries and wages paid	£	487,008	343,275	132,177	204,284	166,582	42,622	1,375,948
Value of power, fuel, etc., used	£	99,166	69,630	22,757	49,660	53,106	5,278	299,597
Value of materials used	£	5,267,808	3,552,902	1,231,062	1,863,323	1,879,284	385,749	14,180,128
Total value of output	£	6,276,225	4,222,476	1,466,727	2,208,836	2,228,391	444,431	16,847,086
Value of production . .	£	909,251	599,944	212,908	295,853	296,001	53,404	2,367,361

(ii) *Production of Flour and By-products.* The production of flour by the mills in each State for the years 1938–39 and 1942–43 to 1945–46 was as follows :—

FLOUR-MILLING : PRODUCTION OF FLOUR.

(Tons of 2,000 lb.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938–39 . .	547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1942–43 . .	363,452	288,134	102,864	97,826	126,274	16,812	995,362
1943–44 . .	496,853	409,190	125,603	149,892	159,799	17,153	1,358,490
1944–45 . .	516,168	393,036	124,473	194,967	161,690	22,534	1,412,868
1945–46 . .	451,895	315,525	96,984	164,986	166,791	22,657	1,218,838

The 1945–46 production of 1,218,838 tons of flour in Australia was valued at £12,083,745. In addition, 493,878 tons of bran and pollard, valued at £2,881,914, were made. The quantity of wheat ground was 63,416,122 bushels.

23. **Bakeries.**—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on in the year 1945–46 is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory, as explained in § 1, par. 1, page 1039. For that reason there is a large number of bakehouses omitted, and consequently the table does not give complete details of the industry. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

BAKERIES (INCLUDING CAKES AND PASTRY), 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(*a*)	Australia
Number of factories ..	..	975	746	320	171	190	92	2,494
Number of persons engaged	..	5,478	4,112	1,918	1,171	695	1,161	14,535
Value of land and buildings	£	3,044,142	1,667,986	545,682	335,847	269,763	358,182	6,221,602
Value of plant and machinery	£	758,439	477,092	202,976	175,996	85,272	104,508	1,804,283
Salaries and wages paid	£	1,303,470	930,304	404,209	273,351	140,982	262,062	3,314,378
Value of power, fuel, etc., used	£	234,401	169,129	64,368	44,178	27,684	33,996	573,756
Value of materials used	£	4,278,895	3,044,713	1,550,260	850,657	514,660	848,338	11,087,517
Total value of output	£	7,431,375	5,247,154	2,599,161	1,409,299	876,349	1,362,691	18,926,029
Value of production ..	£	2,918,079	2,033,312	984,533	514,464	334,005	480,363	7,264,756

(*a*) Includes confectionery.

24. **Sugar-mills.**—(i) *General.* Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XX. " Agricultural Production ".

The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Particulars of cane crushed and sugar produced embodied in the following two tables refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown ; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XX. " Agricultural Production ", which relate to harvest years.

(ii) *Details for New South Wales.* The following table gives details of the operations of sugar mills in New South Wales for the years 1911, 1938–39, and each year 1943–44 to 1945–46 :—

SUGAR-MILLS : NEW SOUTH WALES.

Items.		1911.	1938–39.	1943–44.	1944–45.	1945–46.
Number of factories	..	4	3	3	3	3
Number of employees	..	469	212	317	248	283
Cane crushed	tons	147,799	337,038	290,364	200,050	166,069
Raw sugar produced (94 net titre) ..	tons	17,299	45,106	37,442	26,423	21,220
Molasses produced	gals.	796,440	1,489,090	1,350,400	1,037,600	1,110,000

(iii) *Details for Queensland.* Particulars relating to the operations of sugar-mills in Queensland are shown in the following table for the years 1911 and 1938–39 and each year 1943–44 to 1945–46. Particulars of the production and distribution of molasses as recorded by the mills are also shown.

SUGAR-MILLS : QUEENSLAND.

Items.	1911.	1938–39.	1943–44.	1944–45.	1945–46.
Number of factories ..	49	33	33	32	32
Number of persons engaged	4,295	4,419	3,834	4,276	4,665
Cane crushed .. tons	1,534,451	5,432,193	3,397,617	4,398,268	4,551,971
Raw sugar produced (94 net titre) .. .. tons	173,296	775,064	486,423	643,520	644,661
Molasses—					
Sold to distillers and others .. gals.	2,393,669	8,275,887	7,345,596	9,136,862	9,380,679
Used as fodder .. ,,	789,564	4,237,196	3,055,728	4,719,517	4,675,909
Used as manure ,,	223,000	3,293,543	2,122,220	2,745,617	3,074,755
Run to waste .. ,,	1,847,333	498,926	97,643	16,660	50,902
Burnt as fuel .. ,,		3,748,590	2,176,926	2,251,737	1,748,299
Sold or used for other purposes ,,	..	232,049	441,522	254,358	423,085
In stock .. ,,	1,197,626	..	..	..	..
Total molasses .. ,,	6,451,192	20,286,191	15,239,635	19,124,751	19,353,629

25. **Sugar Refineries.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1945–46 there were two sugar refineries in the State of Queensland, and one in each of the States of New South Wales, Victoria, South Australia and Western Australia. The quantity of raw sugar treated amounted to 446,550 tons, for a yield of 428,130 tons of refined sugar, valued at £13,612,455.

26. **Confectionery Factories.**—(i) *Details for each State.* The figures for 1945–46 are given hereunder:—

SUGAR CONFECTIONERY FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia (*b*)
Number of factories	73	76	18	22	9	(*a*)	198
Number of persons engaged ..	2,693	2,270	348	324	330	(*a*)	5,965
Value of land and buildings £	795,067	525,911	81,267	96,916	57,160	(*a*)	1,556,321
Value of plant and machinery £	609,017	423,422	21,575	37,925	50,545	(*a*)	1,142,484
Salaries and wages paid £	670,741	541,361	63,572	58,363	55,442	(*a*)	1,389,479
Value of power, fuel, etc., used £	59,680	54,838	5,562	7,668	10,764	(*a*)	138,512
Value of materials used £	2,412,284	1,752,250	193,790	174,994	135,610	(*a*)	4,668,928
Total value of output £	4,066,895	3,176,177	336,820	289,563	252,168	(*a*)	8,121,623
Value of production .. £	1,594,931	1,369,089	137,468	106,901	105,794	(*a*)	3,314,183

(*a*) Not available for publication. (*b*) Excluding Tasmania.

(ii) *Total for Australia, excluding Tasmania.* Particulars of the confectionery industry during the last four years are compared with 1938–39 in the following table Confectionery establishments in Tasmania have been combined with bakeries in order to conceal confidential information. Production in Australia is more than sufficient to supply local requirements.

SUGAR CONFECTIONERY FACTORIES(*a*) : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46
Number of factories	..	148	141	163	182	198
Number of persons engaged ..	..	7,256	5,497	5,796	5,795	5,965
Value of land and buildings ..	£	1,423,406	1,400,581	1,451,329	1,480,439	1,556,321
Value of plant and machinery ..	£	1,363,619	1,230,627	1,194,194	1,160,005	1,142,484
Salaries and wages paid ..	£	1,040,984	1,142,331	1,258,561	1,298.281	1,389,479
Value of power, fuel, etc. ,used ..	£	106,869	123,729	129,175	134,914	138,512
Value of materials used ..	£	3,101,955	3,618,711	4,305,338	4,504,124	4,668,928
Total value of output	£	5,627,247	6,559,961	7,642,694	7,933,135	8,121,623
Value of production	£	2,418,423	2,817,521	3,208,181	3,294,097	3,314,183

(*a*) Excluding Tasmania.

27. **Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar Factories.**—(i) *Details for each State.* The following table gives particulars of factories included in this class for 1945–46 :—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC., FACTORIES, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	55	52	13	13	10	14	157
Number of persons engaged	..	3,596	4,864	430	944	233	1,336	11,403
Value of land and buildings	£	663,570	1,046,513	62,556	131,783	57,528	221,704	2,183,654
Value of plant and machinery	£	542,228	683,355	53,870	122,911	57,162	170,453	1,629,979
Salaries and wages paid	£	956,757	1,267,550	110,175	221,198	52,221	339,465	2,947,366
Value of power, fuel, etc., used	£	88,184	110,409	8,295	17,997	4,876	30,318	260,079
Value of materials used	£	3,590,791	5,865,362	524,485	829,867	215,305	1,299,948	12,325,758
Total value of output	£	5,370,604	8,172,809	734,850	1,222,995	326,507	1,836,766	17,664,531
Value of production ..	£	1,691,629	2,197,038	202,070	375,131	106,326	506,500	5,078,694

(ii) *Total for Australia.* Particulars of these establishments in Australia for the four years 1942–43 to 1945–46 compared with 1938–39 are given hereunder :—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC., FACTORIES, AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	123	143	152	168	157
Number of persons engaged ..	..	6,476	9,868	11,416	12,858	11,403
Value of land and buildings ..	£	1,382,150	1,667,493	2,055,850	2,409,005	2,183,654
Value of plant and machinery ..	£	720,639	913,917	1,195,954	1,652,407	1,629,979
Salaries and wages paid ..	£	1,148,991	2,225,581	2,740,715	3,065,087	2,947,366
Value of power, fuel, etc., used ..	£	97,521	206,461	269,996	327,558	260,079
Value of materials used ..	£	4,799,515	9,605,024	11,886,635	13,141,842	12,325,758
Total value of output	£	7,230,914	14,009,177	16,985,506	19,169,509	17,664,531
Value of production	£	2,333,878	4,197,692	4,828,875	5,700,109	5,078,694

During the 1939–45 War production of jams and jellies expanded greatly and a record output of 171 million lb. was attained in 1943–44. Production has since receded and stood at 148 million lb. in 1945–46. The peak output of fruit preserved in liquid occurred in 1940–41 when 161.1 million lb. were produced compared with the previous highest level of 157·8 million lb. attained in 1937–38. Production in 1945–46 was lower at

107,079,000 lb. On the other hand, there has been a marked development in the production of canned vegetables. In 1938–39 output totalled 10,255,000 lb. but, as a result of the war-time demand by the armed services, production reached the high level of 106,962,000 lb. in 1945–46, a figure a little below the record of 119,149,000 lb. in 1944–45.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, sauces and other items manufactured in each State in 1945–46 :—

JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY.							
Jams and Jellies .. '000 lb.	45,725	(a)84,842	6,816	9,794	1,146	(b)	148,323
Fruit Pulp—							
Consumed in own works .. cwt.	22,541	31,390	(c)	8,789	4,200	(c)	89,433
For sale or addition to stock .. cwt.	32,929	110,257	(c)	10,778	21,040	(c)	283,425
Tomato Pulp—							
Consumed in own works .. cwt.	19,540	114,795	(c)	21,195	(c)	(c)	161,420
For sale or addition to stock .. cwt.	41,113	195,289	..	12,810	10,558	10,156	269,926
Fruit, preserved in liquid '000 lb.	21,762	62,931	8,871	10,417	(c)	(c)	107,079
Vegetables, preserved in liquid.. .. '000 lb.	36,926	36,316	(c)	14,180	(c)	(c)	106,962
Pickles .. ..'000 pints	4,591	4,196	(c)	1,620	(c)	..	10,775
Sauces .. " "	10,832	16,660	834	2,623	(c)	(c)	32,038
VALUE.							
Jams and Jellies .. £	1,388,182	a2,353,122	281,440	233,006	32,823	(b)	4,288,573
Fruit, preserved in liquid £	581,618	1,465,811	263,027	227,830	(c)	(c)	2,612,106
Vegetables, preserved in liquid.. .. £	1,278,471	1,172,698	(c)	366,911	(c)	(c)	3,414,909
Pickles .. .. £	214,985	163,795	(c)	69,660	(c)	..	464,289
Sauces .. .. £	656,881	946,870	36,660	100,730	(c)	(c)	1,783,176

(a) Includes Tasmania. (b) Included with Victoria. (c) Not available for publication; figures are included in total for Australia.

28. **Bacon-curing Factories.** (i) *Details for each State.* The table hereunder gives particulars of factories engaged in bacon-curing in each State for 1945–46 :—

BACON-CURING FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	32	20	7	12	6	10	87
Number of persons engaged ..	653	715	792	321	333	65	2,879
Value of land and buildings £	240,032	242,331	204,345	117,175	56,356	29,536	889,775
Value of plant and machinery £	71,653	104,248	126,962	51,004	31,914	9,180	394,961
Salaries and wages paid £	206,130	218,321	242,619	97,865	95,202	18,999	879,136
Value of power, fuel, etc., used £	26,941	30,420	25,547	21,899	18,615	2,753	126,175
Value of materials used £	2,454,806	1,824,376	2,661,399	990,460	1,253,136	225,513	9,409,690
Total value of output £	3,027,720	2,256,837	3,029,624	1,134,800	1,437,215	277,353	11,163,549
Value of production £	545,973	402,041	342,678	122,441	165,464	49,087	1,627,684

(ii) *Quantity and Value of Production.* The number of pigs cured and the quantity and value of production of factories in each State for 1945–46 are shown in the following table :—

BACON-CURING FACTORIES : PIGS CURED AND PRODUCTION, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
PIGS CURED.							
Pigs cured on own account No.	329,256	201,697	270,480	103,421	104,900	26,771	1,036,525
Pigs cured on commission ,,	419	4,146	(*b*)	4,016	(*b*)	231	8,995
Total .. ,,	329,675	205,843	(*b*)	107,437	(*b*)	27,002	1,045,520
PRODUCTS.							
Bacon and ham .. '000 lb.	38,852	20,961	23,879	10,903	10,243	2,667	107,505
Lard .. .. ,,	1,176	1,536	2,903	593	1,021	145	7,374
VALUE.							
Bacon and ham (*a*) .. £	2,832,434	1,432,830	1,613,480	717,803	638,147	173,376	7,408,070
Lard .. .. £	31,095	44,020	67,639	15,660	31,432	4,340	194,186

(*a*) Partly estimated. (*b*) Not available for publication ; figures are included in total for Australia.

Bacon and ham and other pig products are dealt with more fully in Chapter XXI. " Farmyard, Dairy and Bee Products ".

29. **Butter, Cheese and Condensed Milk Factories.**—(i) *Details for each State.* The following table gives particulars of butter, cheese and condensed milk factories in each State for 1945–46 :—

BUTTER, CHEESE AND CONDENSED MILK FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	117	148	100	46	17	34	462
Number of persons engaged ..	2,025	3,874	1,653	729	292	323	8,896
Value of land and buildings £	747,178	1,525,425	739,970	237,472	88,337	167,638	3,506,020
Value of plant and machinery £	998,757	1,344,427	849,635	174,123	95,738	134,686	3,597,366
Salaries and wages paid £	640,714	1,235,307	486,993	207,002	83,843	83,358	2,737,217
Value of power, fuel, etc., used £	198,974	356,025	111,311	46,023	24,480	18,942	755,755
Value of materials used £	6,852,096	13,647,632	10,620,490	2,097,649	989,826	783,217	34,990,910
Total value of output £	8,042,150	16,458,087	11,562,062	2,483,192	1,209,169	1,016,467	40,771,127
Value of production .. £	991,080	2,454,430	830,261	339,520	194,863	214,308	5,024,462

(ii) *Total for Australia.* The progress of industries included in this group during the four years 1942–43 to 1945–46 is compared with 1938–39 in the following table :—

BUTTER, CHEESE AND CONDENSED MILK FACTORIES : AUSTRALIA.

Items.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	523	487	472	469	462
Number of persons engaged	6,851	8,584	8,712	8,694	8,896
Value of land and buildings .. £	2,880,323	3,345,560	3,360,498	3,429,238	3,506,020
Value of plant and machinery .. £	3,066,840	3,521,161	3,499,065	3,487,660	3,597,366
Salaries and wages paid .. £	1,569,531	2,367,324	2,526,017	2,566,477	2,737,217
Value of power, fuel, etc., used .. £	389,501	671,072	708,211	701,016	755,755
Value of materials used .. .. £	29,161,983	33,372,425	35,300,830	31,535,021	34,990,910
Total value of output .. .. £	33,094,851	37,708,383	40,703,304	37,100,708	40,771,127
Value of production .. .. £	3,543,367	4,664,886	4,694,263	4,864,671	5,024,462

(iii) *Quantity and Value of Production.* The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1945–46. These details are restricted to factory production and therefore exclude farm output.

BUTTER, CHEESE AND CONDENSED MILK FACTORIES: PRODUCTION, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
MILK USED ('000 OMITTED).							
For the manufacture of—							
Butter .. gals.	154,131	238,155	204,631	33,302	25,914	19,283	675,416
Cheese .. „	5,122	32,875	25,021	20,884	1,600	2,330	87,832
Condensed, &c., Milk „	17,130	(a)	..	(a)	(a)	..	61,219
PRODUCTS ('000 OMITTED).							
Butter .. .. lb.	74,280	112,180	101,243	17,360	12,553	8,464	326,080
Cheese .. .. „	4,858	33,406	(b) 26,932	22,478	1,817	2,268	91,759
Condensed and concentrated milk .. .. lb.	(a)	80,663	..	(a)	(a)	..	116,782
Powdered milk .. „	9,882	33,616	..	..	..	..	43,498
VALUE ('000 OMITTED).							
Butter .. .. £	5,599	8,243	7,579	1,258	919	632	24,230
Cheese .. .. £	277	1,538	(b) 1,202	998	92	104	4,211
Condensed and concentrated milk .. .. £	(a)	2,369	..	(a)	(a)	..	3,310
Powdered Milk .. £	650	1,680	..	..	..	..	2,330

(a) Not available for publication; figures are included in total for Australia. (b) Includes 1,127,206 lb. of cheese, valued at £48,921, made in establishments not classified as factories.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXI. "Farmyard, Dairy and Bee Products".

30. **Meat and Fish Preserving Works.**—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported has already been referred to in Chapter XIX. "Pastoral Production".

MEAT AND FISH PRESERVING WORKS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories	12	12	14	5	8	6	57
Number of persons engaged ..	911	1,089	4,181	238	224	98	6,741
Value of land and buildings £	134,886	190,646	1,604,466	32,685	409,200	40,575	2,412,458
Value of plant and machinery £	105,254	139,945	833,624	20,044	416,488	25,288	1,540,643
Salaries and wages paid £	264,169	310,686	1,521,861	64,388	111,927	24,292	2,297,323
Value of power, fuel, etc., used £	35,187	33,060	166,286	4,683	15,231	2,313	256,760
Value of materials used £	1,492,444	2,182,448	7,341,389	350,060	337,316	96,885	11,800,542
Total value of output £	2,001,593	2,963,365	9,416,743	421,365	524,671	168,198	15,495,935
Value of production .. £	473,962	747,857	1,909,068	66,622	172,124	69,000	3,438,633

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XIX "Pastoral Production".

31. **Breweries.**—(i) *Details for each State.* The following table gives particulars of breweries in each State for the year 1945–46. It should be noted, however, that the data shown below are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

BREWERIES, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia
Number of factories ..	..	6	8	6	5	6	2	33
Number of persons engaged	..	1,162	1,526	475	379	490	89	4,121
Value of land and buildings	£	1,168,491	748,895	505,778	(a)	276,614	(a)	3,185,582
Value of plant and machinery	£	614,491	815,857	341,895	(a)	226,573	(a)	2,484,442
Salaries and wages paid	£	426,156	621,716	169,076	(a)	189,355	(a)	1,586,366
Value of power, fuel, etc., used	£	108,736	95,413	44,970	(a)	49,803	(a)	351,184
Value of materials used	£	1,337,219	1,469,782	419,486	(a)	542,042	(a)	4,255,684
Total value of output (b)	£	3,836,829	3,013,132	1,191,054	(a)	1,316,156	(a)	10,476,340
Value of production ..	£	2,390,874	1,447,937	726,598	(a)	724,311	(a)	5,869,472

(a) Not available for publication; figures are included in total for Australia. (b) Excludes Excise Duty.

(ii) *Total for Australia.* The next table shows the extent of this industry for 1938–39 and the four years 1942–43 to 1945–46 :—

BREWERIES : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	.. ..	34	33	33	33	33
Number of persons engaged	.. ..	3,698	3,910	3,873	3,919	4,121
Value of land and buildings	.. £	2,801,147	3,201,121	3,196,938	3,188,239	3,185,582
Value of plant and machinery	.. £	2,737,042	2,762,038	2,595,508	2,458,703	2,484,442
Salaries and wages paid	.. £	1,215,473	1,424,451	1,444,363	1,496,658	1,586,366
Value of power, fuel, etc., used	.. £	251,286	317,256	339,482	338,913	351,184
Value of materials used	.. £	3,406,572	4,000,863	4,015,503	4,142,863	4,255,684
Total value of output ..	.. £	9,030,309	9,736,720	9,969,828	10,151,935	10,476,340
Value of production ..	.. £	5,372,451	5,418,601	5,614,843	5,670,159	5,869,472

The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928–29 to 49.8 million gallons in 1931–32, but thereafter increased each year to 109.2 million gallons in 1941–42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about 100 million gallons from 1942–43 to 1944–45. Production rose to 107 million gallons in 1945–46 and to 128 million gallons in 1946–47.

The average annual consumption of ale, stout and beer prior to the economic depression of the early thirties exceeded 11 gallons per head of the population ; it dropped to 7.32 gallons in 1931–32, increased to 13.76 gallons in 1941–42 and declined again to about 13 gallons during the period of control. In 1945–46 the consumption per head increased to 13.45 gallons.

(iii) *Materials Used and Production.* The table below shows the quantities of raw materials used and the quantity and value of ale, stout and beer brewed in each State during 1945–46.

BREWERIES : MATERIALS USED AND PRODUCTION, 1945–46.

Particulars.			N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
RAW MATERIALS USED.									
Malt	..	bushels	1,132,611	1,016,854	353,371	(b)	366,462	(b)	3,239,735
Hops	..	lb.	811,001	879,377	272,512	(b)	238,367	(b)	2,512,865
Sugar	..	cwt.	168,560	139,100	43,860	(b)	30,780	(b)	421,52[illegible]
RAW MATERIALS USED PER 1,000 GALLONS OF ALE, STOUT AND BEER PRODUCED.									
Malt	..	bushels	28.99	28.81	31.16	32.09	34.73	40.18	30.22
Hops	..	lb.	20.76	24.92	24.03	30.41	22.59	21.59	23.44
Sugar	..	cwt.	4.31	3.94	3.87	3.89	2.92	2.48	3.93
ALE, STOUT AND BEER BREWED.									
Quantity		gallons	39,073,817	35,292,111	11,338,922	(b)	10,552,015	(b)	107,196,702
Value (a)	..	£	3,760,604	2,904,397	1,186,731	(b)	1,277,336	(b)	10,236,295

(a) Excludes Excise Duty. (b) Not available for publication; figures are included in total for Australia.

32. **Distilleries.**—Distilleries are located in all the States except Western Australia and Tasmania. The following table, which has been compiled from returns of the Excise Branch of the Department of Trade and Customs, shows the materials used in distilleries in Australia and the quantity of spirits distilled therefrom for the years 1942–43 to 1945–46 compared with the year 1938–39.

DISTILLERIES : AUSTRALIA.

Particulars.	Unit of Quantity.	1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
PRINCIPAL MATERIALS USED.						
Barley Malt	bushel	89,528	220,081	240,386	245,306	296,002
Barley	,,	80,548	143,637	170,954	145,993	208,847
Wheat	,,	..	41,432	706,712	683,350	108,590
Malted Wheat	,,	..	10,633	11,495	14,209	46,912
Maize	,,	7,643	27,832	18,208	55,625	58,688
Molasses	cwt.	1,405,271	1,418,002	1,086,747	1,158,870	1,158,439
Sugar	,,	..	1,330,034	1,078,714	477,906	522.982
Sugar Syrup	,,	..	423,146	321,183	268,509	240,216
Wine	gal.	11,364,208	11,407,752	12,631,059	10,420,236	15,749,146
Grapes, Skins and Seeds ..	cwt.	170,818	169,846	203,408	112,221	244,786
Raisins	,,	19,521	22,279	15,031	44,455	14,477
SPIRITS DISTILLED FROM—						
		proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Barley and other Grain Malt ..	..	434,578	1,122,660	3,710,810	3,778,128	1,836,659
Molasses and Sugar	..	7,025,416	22,199,638	18,566,633	12,463,738	11,842,105
Wine and Wine Lees ..	..	2,249,265	2,851,301	2,365,028	1,872,633	2,879,030
Other	..	7,305	53,614	76,304	158,079	105,117
Total	..	9,716,564	26,227,213	24,718,775	18,272,578	16,662,911
Spirits denatured	..	4,553,152	19,416,985	18,391,976	12,219,648	8,780,290

33. **Tobacco, etc., Factories.**—(i) *Details for each State.* During 1945–46 there were 26 establishments in which the manufacture of tobacco, cigars or cigarettes was carried on. There are no such factories in Tasmania.

TOBACCO, CIGAR AND CIGARETTE FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Number of factories	8	12	4	1	1	26
Number of persons engaged ..	2,997	2,087	39	9	123	5,255
Value of land and buildings £	588,640	341,747	(*a*)	(*a*)	(*a*)	959,192
Value of plant and machinery £	432,248	273,015	(*a*)	(*a*)	(*a*)	723,962
Salaries and wages paid £	749,800	516,643	(*a*)	(*a*)	(*a*)	1,300,481
Value of power, fuel, etc., used £	36,547	14,038	(*a*)	(*a*)	(*a*)	52,174
Value of materials used £	7,022,802	3,491,123	(*a*)	(*a*)	(*a*)	10,602,035
Total value of output £	8,260,290	4,630,306	(*a*)	(*a*)	(*a*)	13,042,558
Value of production .. £	1,200,941	1,125,145	(*a*)	(*a*)	(*a*)	2,388,340

(*a*) Not available for publication : figures are included in total for Australia.

(ii) *Total for Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories and Victoria one. The Australian market has for many years been largely supplied with local manufactures from the imported leaf. Imports during 1945–46 comprised—manufactured tobacco 129,417 lb., cigars 199 lb., and cigarettes 55,488 lb., and the quantities manufactured in Australian factories were respectively 17,866,000 lb., 125,000 lb., and 8,482,000 lb. The following tables show the extent of the industry in Australia for the four years 1942–43 to 1945–46 compared with 1938–39 :—

TOBACCO, CIGAR AND CIGARETTE FACTORIES : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	30	24	25	25	26
Number of employees	..	5,544	5,376	5,112	5,203	5,255
Value of land and buildings ..	£	1,041,798	984,398	968,985	952,066	959,192
Value of plant and machinery ..	£	942,644	832,620	789,755	752,361	723,962
Salaries and wages paid ..	£	1,095,912	1,288,898	1,243,646	1,230,863	1,300,481
Value of power, fuel, etc., used ..	£	34,483	56,107	44,366	44,389	52,174
Value of materials used ..	£	7,080,574	9,141,931	10,087,241	10,436,032	10,602,035
Total value of output	£	9,800,413	12,803,771	12,934,104	12,851,221	13,042,558
Value of production	£	2,685,356	3,605,733	2,802,497	2,370,800	2,388,349

LEAF USED AND PRODUCTION.

Leaf used { Australian (Stemmed)	'000 lb.	4,489	4,974	4,951	4,658	4,685
Leaf used { Imported („)	„	16,011	19,374	19,202	18,704	18.822
Tobacco made	„	16,305	19,186	18,187	17,448	17,866
Cigars made	„	238	175	134	122	125
Cigarettes made	„	6,731	8,681	8,929	8,740	8,482

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929–30 to over 3 million lb. in 1930–31 ; in 1932–33 the quantity of local leaf used fell to 2.7 million lb., but it has since risen to 4.68 million lb. in 1945–46. In this connexion, see Chapter XX.—" Agricultural Production ".

34. **Sawmills, etc.**—(i) *Details for States.* The most important industry in Class X. is that of sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town, they have been combined in the following tables, together with plywood and bark mills.

SAWMILLS, PLYWOOD AND BARK MILLS, 1945-46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W'Aust.	Tas.	Australia.
Number of factories		665	337	316	60	119	268	1,765
Number of persons engaged ..		6,782	4,627	5,648	1,487	2,166	1,881	22,591
Value of land and buildings	£	988,361	526,943	413,120	275,392	198,500	120,933	2,523,249
Value of plant and machinery	£	1,025,102	812,599	692,029	194,334	389,096	347,785	3,460,945
Salaries and wages paid	£	1,718,175	1,263,603	1,454,702	385,417	565,701	454,370	5,841,968
Value of power, fuel, etc., used	£	113,591	92,623	68,367	21,302	45,484	34,070	375,437
Value of materials used	£	4,302,235	2,612,644	2,425,018	1,201,766	850,435	781,918	12,174,016
Total value of output	£	7,261,796	4,693,586	4,607,743	1,921,242	1,740,725	1,482,880	21,707,972
Value of production ..	£	2,845,970	1,988,319	2,114,358	698,174	844,806	666,892	9,158,519

(ii) *Total for Australia.* Comparative statistics for 1938–39 and 1942–43 to 1945–46 are shown in the following table :—

SAWMILLS, PLYWOOD AND BARK MILLS : AUSTRALIA.

Items.		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories ..	..	1,660	1,558	1,622	1,645	1,765
Number of persons engaged ..	..	19,104	19,900	20,023	20,608	22,591
Value of land and buildings ..	£	2,054,611	2,093,726	2,163,399	2,256,446	2,523,249
Value of plant and machinery ..	£	2,785,716	2,979,732	3,162,761	3,165,992	3,460,945
Salaries and wages paid ..	£	3,634,627	4,839,413	5,087,183	5,315,207	5,841,968
Value of power, fuel, etc., used .	£	225,782	308,868	325,212	344,560	375,437
Value of materials used ..	£	8,522,895	9,485,003	10,871,168	11,016,417	12,174,016
Total value of output	£	14,537,888	17,395,542	19,278,114	20,033,902	21,707,972
Value of production	£	5,789,211	7,601,671	8,081,734	8,672,925	9,158,519

The sawmill output of native timber, which declined from 740 million super. feet in 1925–26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938–39 and stood at 895 million super. feet in 1945–46. Further reference is made to the sawmilling industry in Chapter XXII.—" Forestry ".

35. **Cabinet and Furniture Making and Upholstery Factories.**—These industries constitute the principal manufactures in Class XI. The following table gives particulars for each State in 1945–46 :—

CABINET AND FURNITURE MAKING AND UPHOLSTERY FACTORIES, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	269	284	89	85	105	42	874
Number of persons engaged ..	3,547	2,832	1,439	1,139	708	394	10,059
Value of land and buildings £	805,831	740,025	236,032	155,804	153,663	48,136	2,139,491
Value of plant and machinery £	211,441	169,455	64,097	74,989	45,375	16,574	581,931
Salaries and wages paid £	1,032,111	654,993	343,746	245,404	151,434	71,883	2,499,571
Value of power, fuel, etc., used £	29,419	18,005	8,745	7,847	3,162	1,834	69,012
Value of materials used £	1,584,715	997,026	587,815	400,535	245,190	98,075	3,913,356
Total value of output £	3,167,110	2,159,572	1,155,456	804,817	523,827	214,850	8,025,632
Value of production .. £	1,552,976	1,144,541	558,896	396,435	275,475	114,941	4,043,264

36. **Printing Works.**—Printing and bookbinding works rank high in importance among the industries of Australia, and in 1945–46 afforded employment for about 26,000 employees, and paid nearly £7,469,000 in salaries and wages, while the value of output amounted to £23,853,000. The first table below gives particulars of establishments engaged in general printing in each State for 1945–46. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow :—

GOVERNMENT AND GENERAL PRINTING WORKS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	340	367	76	62	64	18	927
Number of persons engaged ..	6,498	6,030	1,846	1,234	896	437	16,941
Value of land and buildings £	1,562,762	1,674,218	350,208	225,369	222,161	81,523	4,116,241
Value of plant and machinery £	1,088,975	902,220	168,993	170,491	131,897	62,311	2,524,887
Salaries and wages paid £	1,711,415	1,599,859	436,446	277,554	200,576	117,294	4,343,144
Value of power, fuel, etc., used £	42,391	46,681	11,852	8,134	6,335	2,652	118,045
Value of materials used £	2,223,181	2,213,462	539,535	291,976	273,158	98,440	5,639,752
Total value of output £	5,133,386	4,925,852	1,313,428	736,713	661,045	292,894	13,063,318
Value of production .. £	2,867,814	2,665,709	762,041	436,603	381,552	191,802	7,305,521

NEWSPAPERS AND PERIODICALS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	181	118	54	34	31	7	425
Number of persons engaged ..	4,595	2,185	1,184	624	434	254	9,276
Value of land and buildings £	1,752,692	776,005	484,184	348,822	244,649	40,611	3,646,063
Value of plant and machinery £	1,419,862	413,428	252,158	133,604	73,943	43,297	2,336,292
Salaries and wages paid £	1,573,625	709,210	388,739	201,185	170,612	82,942	3,126,313
Value of power, fuel, etc., used £	58,673	30,823	20,988	8,016	11,609	3,011	133,120
Value of materials used £	2,558,554	1,393,309	431,938	285,684	236,400	63,026	4,968,911
Total value of output £	5,518,095	2,632,677	1,198,316	620,140	583,625	236,756	10,789,609
Value of production .. £	2,900,868	1,208,545	745,390	326,440	335,616	170,719	5,687,578

37. **Paper Making.**—Although the paper manufacturing industry has been established in Australia for many years it was not until the manufacture of paper pulp from indigenous timber commenced in 1938–39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp has risen from 6,000 tons in 1938–39 to nearly 83,000 tons in 1945–46.

The number of factories operating in 1945–46 comprised two in New South Wales, five in Victoria, one in Queensland, South Australia and Western Australia and two in Tasmania. In the latter State newsprint, writing and printing papers are produced and in the other States wrappings, other papers and boards. Particulars for this industry are given in the following table for the years 1938–39 and 1942–43 to 1945–46.

PAPER MAKING, INCLUDING PULP MILLS : AUSTRALIA.

Items..		1938–39.	1942–43.	1943–44.	1944–45.	1945–46.
Number of factories	..	7	12	12	12	12
Number of persons engaged ..	..	1,961	4,887	4,758	4,625	4,705
Value of land and buildings ..	£	849,578	1,525,537	1,491,848	1,521,419	1,525,187
Value of plant and machinery ..	£	1,712,662	3,326,730	3,178,251	2,920,885	2,509,426
Salaries and wages paid ..	£	466,548	1,479,907	1,526,609	1,525,871	1,577,146
Value of power, fuel, etc., used ..	£	200,998	560,924	586,710	596,399	598,979
Value of materials used ..	£	1,095,318	3,869,161	4,047,788	4,081,491	3,802,205
Total value of output	£	2,301,531	7,549,622	7,954,232	8,094,486	7,417,772
Value of production	£	1,005,215	3,119,537	3,319,734	3,416,596	3,016,588

38. **Rubber Goods (Including Tyres made).**—The following table gives particulars of this industry for each State during 1945–46 :—

RUBBER GOODS (INCLUDING TYRES MADE), 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	12	26	2	5	2	..	47
Number of persons engaged	..	3,405	3,263	258	137	5	..	7,068
Value of land and buildings	£	627,897	584,332	(a)129,471	15,828	(a)47,834	..	1,269,036
Value of plant and machinery	£	401,737	545,690	(a)57,572	19,265	(a)13,098	..	980,215
Salaries and wages paid	£	1,108,723	1,053,775	(a)143,492	31,314	(a)30,075	..	2,270,664
Value of power, fuel, etc., used	£	135,169	182,369	(a)14,546	3,810	(a)3,171	..	327,006
Value of materials used	£	3,413,631	3,574,583	(a)316,817	34,833	(a)63,266	..	7,188,125
Total value of output	£	4,814,553	5,642,682	(a)573,716	87,576	a131,870	..	10,832,431
Value of production ..	£	1,265,753	1,885,730	(a)242,353	48,933	(a)65,433	..	3,316,400

(a) Includes values recorded in Tyre Retreading and Repairing which are omitted from total.

39. **Tyre Retreading and Repairing.**—Particulars of the tyre retreading and repairing industry in each State during 1945–46 are shown below :—

TYRE RETREADING AND REPAIRING, 1945–46.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	..	106	66	38	22	16	13	261
Number of persons engaged	..	585	381	277	146	130	112	1,631
Value of land and buildings	£	228,484	137,913	(a)	59,295	(a)	34,990	596,008
Value of plant and machinery	£	93,297	64,855	(a)	13,870	(a)	9,477	238,646
Salaries and wages paid	£	146,440	104,295	(a)	40,204	(a)	23,573	411,227
Value of power, fuel, etc., used	£	14,039	12,060	(a)	3,970	(a)	3,181	44,409
Value of materials used	£	343,418	238,306	(a)	98,838	(a)	41,917	937,484
Total value of output	£	677,510	488 550	(a)	172,674	(a)	90,469	1,847,169
Value of production ..	£	320,053	238,184	(a)	69,866	(a)	45,371	865,276

(a) Included with Rubber Goods above, but these figures have been included with the total for Australia.

40. **Electric Light and Power Works.**—(i) *Details for each State.* The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. Since 1938–39 the production of electric light and power has increased from 4,688 to 6,910 million K.W.H. in 1945–46, or by 45 per cent. Particulars for the year 1945–46 are as follows :—

ELECTRIC LIGHT AND POWER WORKS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	100	69	47	44	109	3	372
Number of persons engaged ..	2,859	1,760	797	845	687	123	7,071
Value of land and buildings £	4,181,042	2,644,944	682,372	670,205	464,130	591,980	9,234,673
Value of plant and machinery £	10,874,564	10,233,183	2,193,987	3,160,287	2,097,516	3,571,212	32,130,749
Salaries and wages paid £	1,071,363	681,761	276,731	261,971	252,820	43,098	2,587,744
Value of power, fuel, etc., used £	2,692,513	1,294,295	764,580	714,594	932,244	148	6,398,374
Value of materials used £	496,049	168,045	192,668	94,014	61,016	17,561	1,029,353
Total value of output £	8,749,030	4,167,493	1,736,661	1,648,935	1,506,985	181,251	17,990,355
Value of production .. £	5,560,468	2,705,153	779,413	840,327	513,725	163,542	10,562,628

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 1044.

(ii) *Production.* The increase in the production of electric light and power in each of the States since 1938–39 is shown in the following table :—

ELECTRIC LIGHT AND POWER WORKS : PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	'000 K.W.H.	'000 K.W.H.	'000 K.W.H.	'000 K.W.H.	'000 K.W.H.	'000 K.W.H.	'000 K.W.H.
1938–39	1,948,490	1,222,505	387,368	256,283	307,002	566,691	4,688,339
1942–43	2,844,180	1,776,699	515,254	417,873	317,338	771,282	6,642,626
1943–44	2,826,132	1,777,769	563,489	393,794	313,261	801,945	6,676,390
1944–45 .	2,877,336	1,817,347	602,451	409,866	329,865	802,151	6,839,016
1945–46	2,831,801	1,904,403	612,672	402,134	338,799	819,958	6,909,767

41. **Gas-works.**—(i) *Details for each State.* Gas-works are in operation in the majority of important towns in Australia. New South Wales returned eight coke factories and Queensland two, working as separate industries, but under the present classification these are included in Class I.—Treatment of Non-metalliferous Mine and Quarry Products. The following table gives particulars of gas-works in each State for the year 1945–46 :—

GAS-WORKS, 1945–46.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	39	39	16	4	4	2	104
Number of persons engaged ..	1,289	1,253	351	357	193	59	3,502
Value of land and buildings £	800,378	443,842	182,686	25,300	(a)	(a)	1,571,427
Value of plant and machinery £	3,323,226	3,839,795	612,387	1,108,010	(a)	(a)	9,475,328
Salaries and wages paid £	451,690	425,889	119,687	117,607	(a)	(a)	1,193,684
Value of power, fuel, etc., used £	360,811	39,841	9,838	2,098	(a)	(a)	448,484
Value of materials used £	1,503,659	1,549,585	330,170	319,799	(a)	(a)	3,965,119
Total value of output £	3,605,536	2,436,024	724,806	508,479	(a)	(a)	7,726,391
Value of production .. £	1,741,066	846,598	384,798	186,582	(a)	(a)	3,312,788

(a) Not available for publication ; figures are included in total for Australia.

(ii) *Coal Used and Production.* The following table gives details for 1945–46 :—

GAS-WORKS : COAL USED AND PRODUCTION, 1945–46.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			COAL USED.				
Coal .. .. tons	795,961	608,942	163,897	121,907	(*a*)	(*a*)	1,759,429
			PRODUCTS.				
Gas produced '000 cubic ft.	15,301,710	10,863,665	2,451,388	1,848,371	(*a*)	(*a*)	31,954,138
Gas sold '000 cubic ft.	13,353,932	9,637,297	2,171,894	1,614,687	(*a*)	(*a*)	28,087,865
Coke produced .. tons	499,165	347,149	72,658	75,400	(*a*)	(*a*)	1,027,157
Coke for sale .. tons	288,655	215,311	36,553	50,823	(*a*)	(*a*)	602,655
			VALUE.				
Gas sold .. £	2,586,724	2,749,779	874,382	710,005	(*a*)	(*a*)	7,415,941
Coke for sale .. £	377,408	426,476	49,060	134,781	(*a*)	(*a*)	1,014,362

(*a*) Not available for publication ; figures are included in total for Australia.

Since 1938–39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached almost 32 thousand million cubic feet in 1945–46.

CHAPTER XXV.

WATER CONSERVATION AND IRRIGATION.

A general survey of water conservation in Australia last appeared in Official Year Book No. 23.—1930 pp. 636–661. In view of the growing importance of this subject a comprehensive picture of current development is presented in the following special article which has been prepared by Mr. Ulrich Ellis, of Canberra. The co-operation of various Commonwealth and State Departments and other bodies connected with water conservation was sought and freely given, and valuable assistance was rendered by them, particularly in the direction of supplying basic information for incorporation in the article.

The statistics which in recent years have been contained in this chapter have been included in the article.

THE CONSERVATION AND USE OF WATER IN AUSTRALIA.

§ 1. Geographical and Climatic Factors.

1. **General.**—To appreciate the significance of the Australian water pattern it is necessary to relate the geographical configuration of the continent to climatic and other allied conditions. Chapter II. of this Year Book (page 27), deals with the physiography of Australia, and more detailed information is available in earlier issues. Therefore it is proposed to present in this article merely a simplified picture of the main geographical and climatic features.

2. **Topographical.**—Examining the continent from east to west, a narrow belt of coastal plain is found to extend along the eastern coast, bounded by the Great Dividing Range which extends from the far north of Queensland to the south-east of New South Wales, thence westward through Victoria. This mountain system is never more than 250 miles, and at one point only 27 miles from the coast. West of the range the country descends gradually until areas are reached, in the northern interior of South Australia, which are at or below sea level. Thence there is a gradual rise till the coastal mountains of Western Australia are reached, and the western shores are again flanked by a narrow coastal plain. The average elevation of the continent is approximately 900 feet but mountains in the Australian Alps (in the south-eastern highlands) rise to 7,300 feet. A predominant feature is the absence of high mountains over a large part of the continent.

3. **River Pattern.**—Most of the rivers are on the eastern coast, but owing to the proximity of their catchments to the sea, they are comparatively short. The longest river on the northern Coast is the Flinders (520 miles) which flows into the Gulf of Carpentaria, while the Burdekin, on the east coast of north Queensland, is 475 miles.

The Murray-Darling system drains one-seventh of the continent. The main Murray rises in the Australian Alps, and carries substantial quantities of water, especially in the winter and spring, through the semi-arid areas to the westward. Though its highland catchments experience a high average rainfall, exceeding 70 inches, and melting snows augment the streams, the volume is sometimes seriously affected by the variability of precipitation on the watersheds. Apart from the Murrumbidgee, which also rises on the southern highlands, and is snow fed, most of the other tributaries are irregular in flow, though sometimes contributing substantial quantities of flood waters. The Goulburn River in Victoria is fairly regular, and contributes large flows practically every year.

4. **Climate and Settlement.**—Australia is a continent 2,974,581 square miles in extent, in which climatic conditions range from the alpine to the tropical. Though average rainfall on the north coast of Queensland ranges up to 160 inches the annual average in a great part of the continent is less than 10 inches. It is estimated officially that 37.6 per cent. of the total area receives an average of less than 10 inches; 57.5 per cent. less than 15 inches; 68.4 per cent. less than 20 inches; 77.5 per cent. less than 25 inches; and 84.8 per cent. less than 30 inches per annum.

In terms of settlement these figures can be interpreted only if related to land use possibilities, soil conditions, incidence and variation of rainfall, temperature and evaporation, etc. For a fuller statement of climatic factors see § 2 "Climate and Meteorology of Australia" of Chapter II. of this Year Book (page 30).

A recent interpretation by Dr. A. E. V. Richardson, Chief Executive Officer of the Council for Scientific and Industrial Research, suggests these general conclusions :—

Thirty-four per cent. of the continent is of little value because the major portion of this area is true desert and uninhabitable, while the remainder is capable of carrying only sparse stock population.

Forty-two per cent. is likely to remain extensive sheep and cattle country for the most part, with only a sparse to moderate stock population.

Twenty-four per cent. receives a rainfall which is adequate for agriculture and intensive stock raising. A substantial part of this well-watered region is unsuited, however, by reason of rugged topography and barren soils, for the cultivation of crops.

Approximately one quarter of one per cent. may ultimately be regarded as suitable for irrigated culture, owing to the limited water resources of Australia.

Major population development has taken place in those areas in the east, south and south-west which have maximum water supplies derived under conditions favoring settlement ; but there is ample evidence that in these and other areas possibilities exist for further expansion and population growth. Though considerable areas of Australia may be classed as dry it should be noted that most other continents face difficult settlement problems because large areas of land are too hot, too cold, too rugged, too wet, or too dry to support substantial population with reasonable living standards.

§ 2. Water Resources and their Utilization.

1. **Surface Supplies.**—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. Therefore, it is impossible at present to estimate, with any degree of reliability, the total average annual flow of Australian streams. The streams of the Murray-Darling system provide an estimated annual average of 12,000,000 acre feet from a catchment of 414,000 square miles. The average for the rivers of Northern Queensland has been computed at a figure approximately 18,000,000 acre feet. The coastal streams of northern New South Wales and southern Queensland have been assessed at about 10 or 12 million acre feet.

The extensive and reliable records of the Victorian State Rivers and Water Supply Commission estimate the aggregate flow of all rivers gauged in that State, including Murray tributaries, at 14,000,000 acre feet.

As great volumes of water do not flow through other areas, it is doubtful whether the total annual average flow of all Australian rivers would exceed 60,000,000 acre feet, a figure small in comparison with the flow of rivers in other continents.

For purposes of comparison the following estimates of mean annual discharge in other parts of the world are stated here in millions of acre feet : Nile, 72 ; Danube, 228 ; Amazon, 1,780 ; Volga, 148 ; Mississippi, 474 ; and the ten main rivers of the United States of America, 900 (in the aggregate).

2. **Irrigation.**—(i) *History.* The history of irrigation in Australia commenced in Victoria after the droughts of 1877 and 1881, when it became recognized that the northern plains could be developed only with water artificially supplied. Thereupon, the Government began the systematic regulation of north-flowing streams. George Chaffey and his brother (who were successful irrigationists in California) were invited to investigate the possibilities of the Murray River from Echuca to Renmark. The Chaffey brothers later established irrigation settlements at Mildura (Victoria) and Renmark (South Australia). Though their efforts were at first clouded with difficulty and misfortune, the possibilities of irrigated culture in these areas were proved beyond doubt.

The Irrigation Act passed by the Victorian Government in 1886 influenced the whole future of water development in Australia. This Act vested in the Government the right to use water in any stream, lake or swamp; provided that no riparian rights could be established which might prevent the use of water for irrigation; authorized the construction of Government works; and provided finance for irrigation trusts elected by the people to conduct local schemes. Similar legislation followed in other mainland States.

(ii) *Extent and Nature.* Fifty per cent. of Australia's irrigated acreage is now in Victoria, and about 68 per cent. is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In these areas served by the Murray and its tributaries irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes.

Approximately fifty per cent. of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where fodders and pastures are served. Irrigation schemes have not been developed in Tasmania or the Northern Territory.

With the expansion of markets for primary products after the 1914–18 War, the irrigated acreage has gradually extended and is now more than four times as large as in 1917. The following statistical statements illustrate the extent and nature of irrigated culture :—

IRRIGATION : AREA IRRIGATED.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1932–33 ..	*a*130,977	474,716	31,409	42,556	6,434	7,605	..	693,697
1933–34 ..	*a*131,772	435,324	29,363	42,898	7,640	9,194	..	656,191
1934–35 ..	*a*125,423	494,226	34,138	39,594	8,861	7,786	26	710,054
1935–36 ..	*a*138,016	495,835	44,283	42,672	11,396	8,987	123	741,312
1936–37 ..	*a*151,683	518,827	44,509	42,292	13,295	9,987	70	780,663
1937–38 ..	*a*170,719	590,112	49,154	44,250	14,284	8,428	6	876,953
1938–39 ..	*a*183,518	515,357	48,953	43,602	14,278	8,599	50	814,357
1939–40	*d*320,875	517,[illegible]03	55,153	44,470	15,443	8,[illegible]50	263	968,763
1940–41 ..	*d*325,075	596,662	60,961	46,268	14,513	8,821	391	1,052,691
1941–42(*c*) ..	*d*354,762	602,074	(*b*)	45,757	15,060	6,975	48	(*b*)
1945–46 ..	*d*331,030	656,845	68,347	42,192	16,864	11,279	502	1,127,059
1946–47 ..	*d*544,775	708,590	79,030	46,145	17,947	9,326	743	1,406,556

(*a*) Excludes pasture and fallow lands. (*b*) Not available. (*c*) Details for years 1942–43 to 1944–45 are not available. (*d*) Includes pasture and fallow lands.

LAND UNDER IRRIGATED CULTURE : 1946–47.

Crop.	Area (Acres).							
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust	Tas.	A.C.T.	Aust.
Cereals, Hay, etc.	140,333	135,073	15,022	1,127	..	240	486	292,281
Rice	32,096	..	..	..	..	..	..	32,096
Vegetables ..	15,884	14,594	16,441	5,527	4,308	..	147	56,901
Orchards ..	20,246	34,324	2,317	7,631	2,330	1,207	..	140,575
Vineyards ..	11,243	39,035		22,080	162	..	..	
Sugar Cane ..	..	..	40,558	..	..	..	..	40,558
Hops	..	..	..	..	..	1,153	..	1,153
Cotton ..	..	..	346	..	..	..	..	346
Other Crops ..	*ab* 58,515	(*b*) 9,138	(*c*) 3,573	468	713	535	25	72,967
Total Crops	278,317	232,164	78,257	36,833	7,513	3,135	658	636,877
Pastures ..	266,458	476,426	773	9,312	10,434	6,191	85	769,679
Total	544,775	708,590	79,030	46,145	17,947	9,326	743	1,406,556

(*a*) Includes lucerne for grazing and cutting, 27,994 acres. (*b*) Includes fallow land (*c*) Includes tobacco, 1,551 acres.

(iii) *Statistical Aspects.* It should be noted that the basis of recording statistics of water use differs in various States. Therefore, while every attempt has been made to present a uniform statistical picture, it has been difficult to ensure that statistics quoted as between States are strictly comparable in detail. Some steps have been taken by State authorities with a view to securing uniformity of statistical data, but until this objective has been achieved allowance should be made for this factor in this article.

(iv) *Irrigation Trends.* In the past, Government policy has concentrated largely on supplying cheap water to the semi-arid fringe between the ten and twenty inch rainfall isohyets. Now that the limits of water availability are more clearly known, new trends are appearing. Increased attention is being given, for example, to the improvement of irrigation techniques in established areas. Science is tending to seek maximum results from existing supplies, and it is even admitted in some areas that less water, more efficiently applied, will yield better results.

There is also a growing appreciation of the benefits and necessity of irrigation in humid and sub-humid areas with a flush annual rainfall. While the annual average might be comparatively high in such areas, the bulk of the rain may fall in a few months of the year. Consequently it is being increasingly recognized that irrigation, where possible, is an advantage to stabilize production (both as to quantity and quality) over the dry months, or to balance the varying precipitation between the good and lean years.

Similarly, irrigation is being used along the Murrumbidgee and Murray to stabilize the stock industries, especially on an " extensive " basis. Water is being provided for parts of existing holdings (say one acre in ten or more) in certain areas, thereby enabling the best portions of holdings to be devoted to irrigated pastures and fodders, thus supplementing natural rainfall and natural feed.

In line with the construction of barrages at the mouth of the Murray, consideration is being given in other parts of Australia to the provision of weirs which will prevent the entry of salt water, thereby enabling fresh water to be drawn direct from coastal streams for farm, domestic and industrial purposes, enabling the reclamation of flats and swamps now unsuitable for productive purposes owing to the presence of tidal salt, and safeguarding existing farms from periodical deluges by salt water through floods and ocean storms.

A significant trend is the growing appreciation of the benefits to be derived from the " marriage of electric power and water ". Recent surveys indicate that while oil pumps and windmills are used extensively for pumping water, cheap electric power is being sought increasingly to aid pumping operations for stock, domestic and irrigation purposes. In the Inkerman-Home Hill area of North Queensland and in the Lockyer Valley in southern Queensland, electricity development policies have been specifically designed to assist and encourage irrigation. Special rates for power pumping are provided by the Clarence River County Council in northern New South Wales to permit farmers to pump water at night when normal power demands are low. This policy has had a particularly marked effect on the production of winter vegetables and tomatoes in the Coff's Harbour–Valla districts.

Finally, it can be said that an increase in the extent of spray irrigation has been recorded in recent years, aided by electric power and internal combustion engines.

(v) *Research.* Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following : High water tables due to the application of water to land where no natural drainage lines exist, or where drainage lines are too small to cope with extra water ; presence of salt in semi-arid soils, resulting in surface accumulation ; salinity of water, which makes it unsuitable for human beings, stock and plant life ; adverse reactions of semi-arid soil types to increasing quantities of water which affect the sub-soil ; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle ; and growth problems affecting plants and trees.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations :—Merbein (Victoria), horticultural problems, mainly vines, soils, watering and diseases ; Griffith (New South Wales), mainly citrus and vegetable problems ; Deniliquin (New South Wales), pastures ; Werribee (Victoria), stock diseases. These stations are in close contact with the settlers. Merbein Station was originally financed partly by the settlers, but funds are now contributed, in addition, by primary industry boards, co-operative companies and associations, with contributions from the New South Wales Water Conservation and Irrigation Commission as well. The Griffith Station is maintained by the Organization in co-operation with the New South Wales Water Conservation and Irrigation Commission.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established.

It is of interest to note in passing that the Organization is also conducting experiments to test the possibility of " making rain " by stimulating precipitation of moisture from clouds through the introduction of such substances as dry ice.

An important step forward in agricultural development in Australia has been taken in the creation of the Irrigation Research and Extension Committee with head-quarters on the Murrumbidgee Irrigation Areas. The scheme aims to provide the best possible service to farmers. It is regarded as an experiment in organization and regional administration which may have far-reaching effects. The objectives are :—

(*a*) The provision, by the proper authorities, of administrative machinery for the continuation and development of the agricultural extension services to the farmers in the defined sub-region.

(*b*) Providing a mechanism for advising on the formulation, review, and adjustment of local agricultural policy and organization.

(*c*) Providing means whereby farmer opinion will have due weight in the consideration of regional agricultural administration and policy.

(*d*) The bringing about of a unified approach to sub-regional extension in all branches of agriculture.

(*e*) The research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein.

(*f*) The achievement of a close liaison between research and extension.

(*g*) Conducting research in extension methods.

The Committee is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. Introduced in the present form in 1947, the scheme is to operate initially for a period of seven years.

3. **Preservation of Catchments.**—As water conservation commences on the catchments, it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimize effects of floods, overstocking, bush fires, and destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.

The Victorian Parliament passed the Soil Conservation and Land Utilization Act in 1947 to establish an authority to control land on catchments, to determine whether such land shall be used for forestry, grazing or other purposes, and to delegate to other authorities (such as the Forestry Commission and the Soil Conservation Service) the responsibility of carrying out necessary works to maintain catchment efficiency. The Act had not been put into operation when this article went to press. In New South Wales a Conservation Department was established in 1944 under single Ministerial control, linking the Water Conservation and Irrigation Commission, the Soil Conservation Service (established in 1938) and the Forestry Commission. In Queensland the Bureau of Investigation has been established under the Land and Water Resources Act of 1943 designed to bring about the co-ordinated development of land and water resources. Other States are also giving attention to this problem.

4. **Hydro-electric Power.**—Australia's main coal deposits lie within the well-watered regions, but with accelerated industrialization, increased interest is being displayed in the development of hydro-electric power for rural electrification, for stabilizing inter-connected systems, for contributing to metropolitan peak demands, and for general industrial and domestic purposes. On the mainland it is usual to allot water for irrigation purposes, combining this with hydro-electricity to whatever extent is possible. During summer, when irrigation is proceeding, there is ample discharge for power, but in the non-watering period the main objective is to store water.

Hydro-electric possibilities are confined almost exclusively to the eastern coastline of the mainland and to Tasmania. In 1932 the Power Survey Sectional Committee of the Standards Association of Australia estimated water power resources to be 4,750,000 h.p. of which 3,500,000 was located in Tasmania. Authorities are now inclined to believe that mainland sources could contribute approximately 2,000,000 h.p., bringing the total to 5,500,000. Recent investigations concerning the potential use of the Snowy River may increase the estimate further. The Committee also estimated that the water power potential in Papua and New Guinea was approximately 20,000,000 h.p.

It has been estimated that in 1946–47, of a total of 2,184,226 k.w. generated by all Australian power stations, the quantity derived from water power was 277,557 k.w., representing 12.8 per cent. of the total. The total hydro-electricity generated in each State (and the percentage of hydro-power to total electric power in that area) was as follows :—New South Wales, 26,845 k.w. (2.7 per cent.) ; Victoria, 51,906 (8.9 per cent.) ; Queensland, 4,360 (2.2 per cent.) ; and Tasmania, 194,446 (100 per cent.)

Hydro-electricity is generated in all States except South Australia and Western Australia and in the Northern Territory. Water is the sole source of electric power in Tasmania, all other States depending largely on steam and oil.

5. **Sub-surface Supplies.**—(i) *General.* While a more or less complete general picture of the available and potential surface water resources exists much remains to be done with regard to the location and development of sub-surface supplies, although the extent and potentials of the artesian basins—particularly the Great Artesian Basin—have been fairly accurately determined. In view of the importance of sub-surface waters as the basis of settlement over large areas of Australia, it is necessary to devote particular attention to these resources.

The use of sub-artesian supplies is also extensive and more development is possible, but the shallower groundwater supplies, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed in any degree, except in a few localities. Increasing efforts are being made to locate and develop sub-surface supplies and comprehensive hydrological surveys have been initiated in many parts of Australia for the purpose of locating, further developing and utilizing these waters.

A good deal of investigational work has been carried out and many data have been recorded in respect of artesian basins, and the decreasing flow therefrom ; and this information is being progressively supplemented, as is also the information recorded in respect of sub-artesian supplies.

(ii) *Definitions.* The term "artesian" is applied when the water contained in an acquifer and tapped by a bore hole rises and flows under hydro-static pressure above ground level. When a water bearing stratum is intersected by a bore hole, and the water rises above the level at which it is tapped but does not rise sufficiently high to flow naturally above surface level, it is termed "sub-artesian".

The term "ground water" is generally applied to shallower waters found in alluvium or sand beds not confined between impervious strata, and these waters usually do not rise in a bore hole above the level at which they are met.

(iii) *Artesian and Sub-Artesian Supplies.* Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 550,000 square miles, comprising about 350,000 in Queensland, 76,000 in New South Wales, 100,000 in South Australia and 24,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal :—

PRINCIPAL WATER-BEARING BASINS : AUSTRALIA.

Name.	State.	Geological Age.	Area.	Depth of Water.
			Square Miles.	Feet.
Great Artesian . .	Queensland, New South Wales, South Australia and Northern Territory	Cretaceous-Jurassic . .	550,000	Up to 7,000
Murray . .	Victoria, New South Wales, and South Australia	Miocene	107,000	100 to 900
Torrens . .	South Australia . .	Recent Pleistocene . .	4,000	Up to 600
Coastal Plain . .	Western Australia	Recent Jurassic . .	10,000	200 to 2,500
Adelaide . .	South Australia . .	Recent Oligocene . .	1,100	100 to 500
Gippsland . .	Victoria . .	Pleistocene-Oligocene	1,800	200 to 1,800
Port Phillip . .	Victoria . .	Pleistocene-Oligocene	300	Up to 600
Eucla	Western Australia, South Australia	Pliocene-Miocene . .	68,000	300 to 2,000
North-west . .	Western Australia	Tertiary Permian . .	40,000	400 to 4,000
Collie . .	Western Australia	Permian	500	. .
Desert . .	Western Australia	Permian	130,000?	200 to 3,000

(iv) *Discharge and Number of Bores.* The first artesian bore within the Great Artesian Basin was completed in 1878 at Kallara Station, near Bourke in New South Wales. Since then more than 3,000 artesian bores, ranging in depth from 10 to 7,000 feet have been constructed within the Great Artesian Basin which extends over the three States of Queensland, New South Wales and South Australia and into the Northern Territory.

The present daily free discharge from all bores continuing to flow in Australia is in excess of 350 million gallons, of which more than 90 per cent. is probably lost by evaporation and seepage.

The number of sub-artesian bores and wells throughout Australia is more than 200,000.

(v) *Quality.* Artesian water is used primarily for stock watering purposes and its availability has enabled vast areas to be settled which otherwise would be unoccupied. Indeed it is said that its use has doubled the stock-carrying capacity of Queensland alone. In some areas artesian waters have chemical properties which make them unfit for use even by stock, and in even wider areas sub-artesian waters contain such high proportions of dissolved salts as to be quite useless.

Artesian water generally, particularly throughout the Great Artesian Basin, is good stock water, but unsuitable for plant life, even if it were available (which it is not) in sufficient quantity for irrigation. In certain areas sub-artesian waters are suitable for all uses including irrigation, while a considerable amount of irrigation is carried out in some districts from shallow ground water supplies.

(vi) *Diminution Problems.* In common with other countries possessing artesian supplies, Australia, particularly with regard to the Great Artesian Basin, has been faced with the problem of flow diminution. Hydrologists and engineers in close touch with the early discovery and development of artesian supplies soon recognized the fact that flows were diminishing as more bores were drilled, but wastage continued (and still continues in many cases) despite continued warnings.

In Queensland the total flow from artesian bores, which in 1914 reached a peak of approximately 355 million gallons a day, diminished to about 230 million gallons in 1945, although the number of bores had been increased by more than 800. Similar conditions have applied in New South Wales and South Australia, many bores having ceased to flow ; and most of the older still-flowing bores now have only about 30 per cent. of their original flow remaining.

Although only a small proportion of the actual quantity of water stored in the Great Artesian Basin has been drawn off, much of the original pressure has been lost, the hydraulic gradient has been steepened, and most of the free flow has been lost for all time.

The Queensland Government appointed a Committee to investigate various aspects relating to the Great Artesian Basin, with particular reference to the problem of diminishing supply, and its first interim report was published in 1945. This report contends that less than one inch depth of water has been retrieved by all Queensland bores in the past fifty years, and as the water-bearing strata are hundreds of feet thick over a large area, this is a small fraction of the total storage. The Committee is now investigating the economic aspects.

It has been said that eventually all bores within the Great Artesian Basin would cease to flow naturally and that the water would have to be pumped to the surface for use. Investigations in both Queensland and New South Wales have refuted this impression. It is now considered that although many of the bores, particularly those located at higher surface levels, will ultimately cease to flow, many will not cease. They will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by the outcropping sandstones which form the intakes at or near the surface. These outcrops occur along the western slopes of the Great Dividing Range in Queensland and New South Wales and dip in a general south-westerly direction, with more or less continuity, and of variable thicknesses and depths, across the full width of the basin, to form the storage reservoir or acquifers from which the flows are derived.

The pressure which causes the water to flow from a bore penetrating an artesian acquifer, or rise in a bore penetrating a sub-artesian acquifer, is principally gravitational, although it is now considered that the "elastic factor" or "elasticity" of the sand-rock in which the water is stored also has an important bearing upon the pressure which causes water to flow. Flush flows from newly constructed artesian bores (or on re-opening of temporarily closed bores) are attributed to the elastic factor in the sand rocks. When the "elastic" effect has been more or less completely lost, flows tend to stabilize and become steady in conformity with the amount of intake and other hydraulic factors operating.

(vii) *Economic Aspects.* Investigations are now proceeding with regard to (*a*) wasteful methods of distribution of artesian water by open channels or "bore drains" which result in the loss by evaporation and seepage of most of the water, and (*b*) careless use of water.

Investigations in New South Wales into the possibility of distributing artesian water by pipe-line systems to eliminate most of the losses and wastage occurring when open channels are used, suggest that the capital and operational costs would be so high as to make them uneconomic for the pastoral industry.

Diminution in flows from artesian bores continues to be regarded as of serious consequence in some districts in the south-west of Queensland and north-west of New South Wales because of the difficulties and high cost of providing alternative stock and domestic water supplies when flows are no longer sufficient to meet requirements. Water authorities therefore suggest that it is imperative to eliminate wastage as much as possible and that the utmost use should be made of available supplies throughout the whole of the Great Artesian Basin.

The areas considered to be most seriously affected are those where sub-artesian supplies are not available, the terrain is unsuitable for surface water storage because of its poor run-off and other factors, and the depth to the artesian acquifer is so great as to make the construction of bores for pumping supplies practically prohibitive.

Fortunately the areas to which these conditions apply do not comprise a large proportion of the grazing areas of either New South Wales or Queensland, and by far the larger areas in both States will continue to meet the needs of the pastoral industries at costs not uneconomic, even if the water has to be pumped, supplemented by sub-artesian supplies, ground tanks, and other surface storage facilities.

It is significant that even in those areas where diminution of artesian flows has been most marked and flowing supplies have practically ceased, no land has gone out of use. Alternative means of watering stock, although perhaps at a higher cost, have always been found.

(viii) *Ground Water.* The development of shallow ground water supplies for industry, irrigation, stock and domestic purposes, is receiving considerable attention and can in future be depended upon for great expansion. Modern methods employed in several States for the development of such supplies contained in sands and gravel formations have recently produced encouraging results. These supplies are by no means inexhaustible and their development will require to be carefully watched, and possibly controlled, in order that the withdrawals do not exceed the capacities of the reservoirs, and the recharge thereof from rainfall.

Excessive pumping from ground water supplies in many parts of the United States has resulted in the serious depletion of supplies, necessitating strict control of further development and the artificial recharge of the water beds in order to maintain a reasonably stable water table.

Reference is made to the use of ground water on other pages, namely, Burdekin Delta (page 1126), Lockyer Valley (page 1126), and Eyre Peninsula (page 1131).

In passing, it should be noted that many urban supplies are drawn from artesian and sub-artesian sources in various parts of Australia, and that ground water has been developed for industrial as well as domestic purposes in recent years.

The most notable ground water scheme is that conducted by the Hunter District Water Board which supplies a population of 217,900 in the Newcastle area where substantial industries (coal, iron and steel, shipbuilding, etc.) exist. Water storages fed from surface sources are supplemented by ground water from the Tomago sandbeds near the mouth of the Hunter River. In an area of approximately 50 square miles, water-bearing sands (with an impervious bottom at about 60 feet) are charged with rainwater to within a few feet of the surface. The scheme consists of electric pumping units extracting the water by tube wells for delivery to spraying basins for aeration and elimination of gases. Secondary pumps deliver the water to the reticulation system. Each of fifteen pumping stations has an average capacity of a million gallons a day normally, but can deliver up to two million in favorable circumstances for short periods. Pumps and pipe lines are designed for a maximum delivery rate of 25 million gallons a day. Total quantity delivered since 1930, when the scheme was inaugurated, to the end of December, 1947, was 10,020 million gallons.

It is interesting to note that a number of water-bearing sandbeds of a similar nature have been located and examined by the Public Works Department at points along the north coast of New South Wales.

In southern districts of Sydney some industrial concerns obtain considerable supplies of ground water by means of shallow bores, and in both Perth and Adelaide surface resources are supplemented from artesian and sub-artesian sources.

(ix) *Windmills.* In the development of water resources—and especially underground water—windmills have played a substantial part. Without them millions of acres would remain undeveloped. Though it is impossible to obtain precise statistics an unofficial estimate assesses the number in use at approximately 250,000; and that the capital value of windmills now working, including pipes, pumps, tanks, troughs, etc. is in the vicinity of fifty million pounds.

The bulk of windmills are installed on farms and stations for watering live-stock, though they are also used for pumping town supplies and providing water for locomotives, irrigating vegetables, and for retrieving water for domestic use.

Large "direct-acting" windmills, measuring from 17 feet to 30 feet diameter of windwheel, predominate in the western districts of Queensland and New South Wales, in the northern areas of South Australia, in the Northern Territory, and in the Kimberley Division of Western Australia where large mobs of sheep and cattle are watered. The smaller, geared windmills, from 6 feet to 14 feet diameter, are used mainly on farms in coastal areas.

The smaller windmills are similar in general principle to American types, but the large "direct-acting" types appear to have been developed mainly in Australia. By "direct-acting" is meant that the windmills are not back-geared, and so there is one stroke of the pump to each revolution of the wind wheel The wind wheels of geared windmills revolve from 2.33 to 4 times according to size to give one pumping stroke. Small windmills revolve faster than large ones in the same wind velocity so that if they were not back-geared their pumping strokes would be so rapid that they would cause speedy deterioration of the pump parts and undue strains on working parts, etc.

The first windmills in Australia were made principally of wood and required greasing fairly frequently. Improved types have been introduced progressively as the result of experience. In recent years a large direct-acting windmill has been developed which is a fully enclosed, automatically oiled machine, made of steel and cast iron, which needs refilling with oil only once a year; and even then it is unnecessary to climb the tower as in earlier types, an oil pump being provided on the tower near the ground from which the oil is pumped into the crankcase.

6. **Industrial, Metropolitan and Country Town Supplies.**—Human consumption needs are the first objective of water conservation, and the growth and dispersion of communities must be related to the availability and use of water. The growth of large metropolitan populations, associated with the development of substantial secondary industries, has created water supply problems of considerable complexity. Changes in manufacturing processes, apart from the increase of population and industry, accentuate these problems. While manufacture a century ago was comparatively simple, the development of modern industries such as chemicals, paper manufacture, plastics and food processing, has increased the demand for water.

As an illustration, such factors as the increasing consumption of bottled and canned foodstuffs, the provision of amenities such as sewerage and even electric bath heaters, and the development of home gardens, are all reflected in the total demand. The growth of country towns, as well as the development of metropolitan areas, is consequently responsible for the adoption of long-term programmes in all parts of Australia designed to guarantee future supplies on an adequate scale. Details relating to urban water supply systems will be found in Chapter XIII.—"Local Government" of this Year Book (pp. 539–50).

§ 3. National and Interstate Aspects.

1. **Constitutional Phases.**—As the government of Australia is conducted under a Federal system, and as the Commonwealth Constitution makes special reference to water problems, both the Federal and the State Governments have an interest in the control and conservation of water. As main responsibility for control of water resources resides in the State governments, and as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases.

Under the Constitution, the Commonwealth's trade and commerce power extends to navigation (including navigation on rivers), and Section 100 provides that "The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation."

The Commonwealth and the States of New South Wales, Victoria and South Australia entered into an agreement in 1914 for the control of the Murray River which serves the three States mentioned. In 1947 the States of New South Wales and Queensland entered into an agreement for the control and development of the Dumaresq and other rivers which intersect the border of the two States.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945 national aspects of water conservation and use were emphasized. The report recommended the adoption of an all-Australian plan, having the assent of the various governments, to obviate lack of co-ordination resulting in attempts to develop too many schemes simultaneously, thus stimulating production in excess of markets, and competing for available finance, materials and manpower. It also recommended that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

In 1946 a conference between the Commonwealth and States agreed to revive the Irrigation Production Advisory Committee, first established under the authority of the Australian Agricultural Council in 1938. Its main function is to consider the relation of irrigated production to available markets and to advise on the expansion of irrigated production from a national viewpoint. It succeeded the Murray River Advisory Committee established many years earlier. The Commonwealth and the States are represented on the Committee.

Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

2. **Murray River Scheme.**—(i) *General.* The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles or one-seventh of the area of the Australian continent, representing five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland, and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (1,050 miles), the Darling (1,760 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows :—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,400,000 acre feet ; Murrumbidgee River, 2,600,000 acre feet ; Goulburn River, 2,250,000 acre feet ; Darling River, 2,150,000 acre feet ; and Ovens River, 1,200,000 acre feet.

(ii) *History of Control.* Discovered in 1824, the Murray played a substantial part in early pastoral settlement. Navigation was the predominant initial interest, permitting cheap transport of supplies and production. Irrigation settlements which developed after 1887 commenced a new era in the River's history. In 1914 the three State authorities whose territories were served by the River agreed that joint control was necessary, and the following year the Parliaments of the Commonwealth, New South Wales, Victoria and South Australia passed the River Murray Waters Act. This ratified the River Murray Agreement, provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(iii) *Terms of Agreement.* Under the Agreement construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in the locks, and evaporation losses other than in the lakes at the Murray mouth ; together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Under the original agreement the major works comprised two large storages—one on the Upper Murray above Albury (the Hume Dam) and the other at Lake Victoria in Victoria near the South Australian border. In addition, provision was made for a number of weirs and locks along the Murray and Murrumbidgee Rivers. In 1934 the Agreement was varied to provide for the construction of a diversion weir at Yarrawonga (145 miles downstream from the Hume Dam), and the provision of barrages at the mouth of the River to prevent the entry of salt water. The amendment also limited the original proposal for 26 weirs and locks on the Murray and 9 on the Murrumbidgee to 13 on the Murray and 2 on the Murrumbidgee. At the same time it was agreed that the Hume Dam should be completed to a capacity of 1,250,000 acre feet with provision for later increase to 2,000,000. As a result of the amendment, navigation is limited to a route of 600 miles, extending from the mouth to a point some 50 miles above Mildura.

(iv) *Cost.* All works authorized under the amended Agreement (except the enlargement of the Hume Dam to 2,000,000 acre feet) have been carried out at a total cost of £12,000,000, of which approximately half represents the cost of the Hume Dam. Expenditure has been shared equally by the Commonwealth and the three States.

(v) *Hume Dam.* The Hume Dam is situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 100 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately 1 mile. Ultimate plans include provision for hydro-electric generation, for which planning is now in hand. Attention is also being given to the completion of the dam to its designed capacity of 2,000,000 acre feet and also to the enlargement of the inlet channel to Lake Victoria, necessary to permit greater storage of periodic flood flows of short duration.

(vi) *Weirs and Locks.* Yarrawonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction ; and the other below the Lachlan Junction.

(vii) *Distributaries.* The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

(viii) *Lake Victoria.* Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage was completed in 1928 with a capacity of 551,700 acre feet and a surface area of 27,670 acres. The water is used by the South Australian settlements.

(ix) *Murray Mouth Barrages.* Five barrages across channels near the river mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

(x) *State Storages and Works.* In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 771,640 acre feet; Wyangala (Lachlan), 304,000 acre feet; Victoria—Eildon (Goulburn), 306,000 acre feet; Waranga (Goulburn), 333,400 acre feet. No storages exist on the Murray in South Australia. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

(xi) *Extension of Agreement.* Towards the end of 1948 legislative action was taken to ratify an Agreement by the Commonwealth and the States of New South Wales, Victoria and South Australia to vary the original terms. The amended Agreement provides for the increase of the capacity of the Hume Dam from 1,250,000 to 2,000,000 acre feet, the widening of the inlet channel to Lake Victoria storage, and the production of hydro-electric power.

The States of New South Wales and Victoria have agreed to report annually on the condition of the catchment and to take any special action recommended by the Murray River Commission in regard thereto.

The parties have also agreed that the Commission shall have power to initiate proposals for the better conservation and regulation of the river and may have investigations and surveys made respecting additional water storage works which might be carried out by one or more of the contracting governments, subject to the Commission's control.

(xii) *Production.* Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, dairy produce, wool, fat lambs, rice, vegetables, poultry, eggs and pigs. The value of production from these areas has been estimated at about £19,000,000 a year, apart from the value added by processing or manufacture. The Murray River Commission estimates that without irrigation the annual production of these areas would not have exceeded £2,000,000 a year.

(xiii) *Diversions.* The total estimated quantity of water diverted in 1947–48 for irrigation from the Murray and its tributaries (under the Murray River Agreement) was as follows (in acre feet): New South Wales (1,524,897); Victoria (1,807,194); South Australia (157,328); a total of 3,489,419 acre feet.

3. **New South Wales-Queensland Border Agreement.**—The Border Streams Agreement between New South Wales and Queensland, effective from 1st July, 1947, provides for the construction of works on portions of the valleys of the Barwon, McIntyre and Dumaresq Rivers, forming part of the boundary between the two States, on the basis of equal partnership in respect of works expenditure and use of water. The catchments (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. The scheme provides for a major dam on the Dumaresq, near Mingoola, 15 miles upstream from Texas, with a storage capacity of 120,000 acre feet, together with 12 weirs and 4 regulators, at an estimated cost of £1,140,000. Investigations suggest that 70,000 acres close to the storage are suitable for irrigation.

Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry, is being examined. A Commission to carry out the Agreement is being appointed.

4. **Snowy River Scheme.**—(i) *General.* Investigations have been carried out for many years to determine the best means of fully utilizing the waters of the Snowy River, which rises in the alpine area to the east of the Snowy Mountains in the south-eastern corner of Australia. The main stream rises in New South Wales on the slopes of Australia's highest mountain, Kosciusko (7,305 feet), and enters the sea below Orbost in Victoria.

Estimates made by the New South Wales Water Conservation and Irrigation Commission suggest that the average run-off of the Snowy catchment above Orbost is approximately 2,229,150 acre feet per year, based on records for the 35 years from 1907 to 1941. The average run-off above Jindabyne (2,900 feet elevation) accounted for 928,005 acre feet of the total. The average for the river as a whole was exceeded in thirteen of these years. In 1934 the phenomenal figure of 7,003,474 acre feet was recorded.

On this upper catchment of 680 square miles the rainfall varies from 22 inches at Jindabyne to 90 inches at Kosciusko. An important feature of the catchment is that snow falls in considerable quantities during the winter months and may persist for a many as eight months in some areas. The effect of the accumulation of snow in winter is to reduce the discharge of the river at that time and to increase it in summer, thereby maintaining a more uniform flow throughout the year.

(ii) *Diversion Proposals.* Observing that this substantial quantity of water is collected at elevations considerably higher than the courses of adjacent westerly flowing rivers, investigators have from time to time proposed the diversion of the waters of the Upper Snowy catchment to augment supplies for irrigation, stock and domestic purposes in inland areas. As early as 1884 the New South Wales Surveyor-General suggested diversion to the Murrumbidgee by means of an open channel from a point about five miles upstream from Jindabyne.

Various proposals have also been made for the utilization of Snowy water for the production of hydro-electricity, and investigations were made concerning a proposal to divert the water to Sydney to augment the metropolitan supply.

The Government of the Commonwealth and the State Governments of New South Wales and Victoria have certain legal rights in relation to the use of the Snowy. Under a long-standing agreement with New South Wales, the Commonwealth was granted rights in connexion with the development of the Snowy for hydro-electricity to provide for the needs of the Australian Capital Territory. Experience of deficient flow in the Murrumbidgee, which affected the output of hydro-electric power at Burrinjuck and threatened the stability and expansion of the Murrumbidgee Irrigation Areas, led the New South Wales Government to appoint a special investigating committee which reported in 1944 in favor of diversion to the Murrumbidgee.

The Victorian Government also has an interest in the river by virtue of the fact that the Snowy flows through Victoria to the sea.

Furthermore, the Victorian Government has expressed interest in the diversion of the Snowy to the Murray (which rises to the south of Mount Kosciusko) as a means of supplementing electricity supplies and increasing the water available for irrigation purposes along the Murray River.

Following discussions at the Premiers' Conference in 1946 investigations were initiated with a view to utilizing the highland water and power potentialities in the best national interest. During 1947 and 1948 joint investigations were carried out by a technical committee representative of the Commonwealth and the States of New South Wales and Victoria. The members of the Committee had achieved a substantial measure of agreement concerning the works necessary to obtain a maximum quantity of electric power and water through the interlinking of highland and westerly flowing rivers, when this article went to press.

5. **Australian Pattern Summarized.**—From the foregoing it is obvious that water conservation and use has both a national and a local aspect. The following survey indicates the local pattern of water resources and the steps taken by State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation. In New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water for the stock industries (mainly underground sources), and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

§ 4. States and Territories.

1. **New South Wales.**—(i) *Rainfall.* Northern districts receive most of their rain in summer months, the southern districts in the colder months, but in neither case is the pattern so clearly defined as in various sections of other States. Over a large area rainfall is not seasonal, and wet as well as dry periods may be experienced during any portion of the year. Rainfall on the coast and coastal highlands is higher than inland, especially on the northern sectors where cyclonic storms may bring a substantial proportion of the year's rain in a few days. Over an area of 310,272 square miles, comprising New South Wales (309,433 square miles) and the Australian Capital Territory (939 square miles) 19.7 per cent. receives an annual average rainfall less than 10 inches; 43.2 per cent. less than 15 inches; 60.7 per cent. less than 20 inches; and 84 per cent. less than 30 inches. Areas receiving more than 30 inches represent 16 per cent. of the total area of which the 30 to 40 inch areas comprise 9.9 per cent.

(ii) *History.* A Royal Commission under Sir William Lyne in 1887 recommended a system of canals served from diversion weirs on the Murrumbidgee below Wagga. As a result, a water conservation and irrigation branch was attached to the Department of Mines and Agriculture, but except in respect of water for travelling stock in dry areas, little progress followed. Colonel F. J. Home, Chief Irrigation Engineer of the Punjab (India) reported in 1897 that only the Murray and Murrumbidgee could be relied on for regular flows. Mr. H. G. McKinney, who had assisted the Lyne Commission, recommended a major storage at Burrinjuck which was approved by Parliament in 1906 and completed in 1924. In 1910 an Irrigation Trust was established to control the Murrumbidgee Irrigation Areas, served from Burrinjuck, and this system operated until the creation of the Water Conservation and Irrigation Commission established under the provisions of the Irrigation Act of 1912.

(iii) *Administration.* Since 1916, when the Irrigation Act was amended, the Commission has consisted of three members including the responsible Minister (who is chairman) and two appointed Commissioners. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, and irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, and a farm water supply scheme.

Under the Water Act the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Crown. A system of licences also operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

(iv) *Schemes summarized.* The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam on the Lachlan, another tributary. None of the other rivers are regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

(v) *Storages.* The capacities of the main storages (in acre feet) are :—

Murray:—Half share of Hume Dam, weirs and locks to Wentworth (736,420); Stevens Weir, Edward River (7,165).

Murrumbidgee:—Burrinjuck Dam (771,640); Berembed Weir (10,000); Maude Weir (6,740); Redbank Weir (7,360).

Lachlan:—Wyangala Dam (303,900); Lake Cargelligo (29,435); Jemalong Weir (1,790).

Water from the Hume Dam is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for domestic and stock supply and irrigation in the Berriquin and Wakool Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. A balance storage at Lake Cargelligo conserves water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplies the districts of Jemalong and Wyldes Plains, serving an area of 223,936 acres. Wyangala is now producing hydro-electric power. Proposals for future development include provision of a head storage at Belubula River, the construction of a balance storage of 108,000 acre feet at Ballyrogan (now in hand), and the constitution of domestic and stock water districts, or development by licensed diversions.

(vi) *Distributaries.* The approximate total length of channels (including main canals) in New South Wales is 2,597 miles. The approximate length of drains and escape channels is 903 miles, and approximate total length of pipe lines is 9 miles, making a grand total of 3,509 miles of channels and pipe lines, etc.

(vii) *Scheme Types Enumerated.* New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, and Flood Control and Irrigation Districts.

There are four Irrigation Areas: The Murrumbidgee Irrigation Areas consisting of 381,814 acres served with water through a channel system off-taking from the river at Berembed Weir; the Coomealla Irrigation Area of 35,450 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,550 acres, supplied from the Murray by pumping; and the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee. All these areas are administered by the Commission, and details of the various schemes follow.

LAND UNDER IRRIGATED CULTURE : NEW SOUTH WALES, 1946–47.

(Acres).

Systems.	Total Area.	Area Irrigated.										
		Rice.	Other Cereals Grown for Grain.	Lucerne.	Other Fodder Crops.	Pastures.		Vineyards.	Orchards.	Vegetables.	Fallow and Miscellaneous.	Total
						Sown.	Natural.					
Irrigation Areas—												
Murrumbidgee (within the Areas) ..	381,814	27,428	61,992	3,408	7,675	15,025	5,039	5,546	15,674	4,688	28,059	174,53
Lands adjacent thereto	(a)	398	220	(a)	210	(b) 2,830	7,170	..	..	47	200	11,07
Coomealla, Curlwaa and Hay ..	52,806	..	..	143	179	1,019	103	3,173	1,160	12	13	5,80
Total ..	434,620	27,826	62,212	3,551	8,064	18,874	12,312	8,719	16,834	4,747	28,272	191,41
Irrigation Districts—												
Benerembah	121,744	4,240	18,495	1,147	3,120	7,580	3,100	..	..	28	..	37,71
Tabbita	6,316	30	726	6	45	135	..	..	..	..	..	94
Wah Wah ..	567,760	..	5,540	478	..	1,952	150	..	..	..	..	8,12
Berriquin	629,853	..	22,925	10,053	2,304	45,325	10,128	..	..	115	1,649	92,49
Wakool	502,820	..	1,326	959	508	20,061	11,963	..	..	30	409	35,25
Jemalong and Wyldes Plains	223,936	..	4,890	1,847	2,286	1,365	11,086	..	..	..	..	21,47
Lowbidgee Flood Control District ..	367,090	..	..	..	..	..	107,037	..	..	..	..	107,03
Total ..	2,419,519	4,270	53,902	14,490	8,263	76,418	143,464	..	..	173	2,058	303,03
Irrigation Trusts ..	16,031	..	114	104	58	233	336	1,965	369	50	11	3,24
Licensed Diversions— To Irrigate ..	(a)	..	..	9,849	7,720	7,339	7,482	559	3,043	10,914	180	47,08
Grand Total ..	..	32,096	116,228	27,994	24,105	102,864	163,594	11,243	20,246	15,884	30,521	544,77

(a) Particulars not available. (b) Perennial pastures only.

(viii) *Murrumbidgee Irrigation Areas.* (a) *Description.* These areas comprise about a third of the State's irrigated acreage and received (in 1946–47) 346,064 acre feet of the total water allocated for stock, domestic supply and irrigation (1,013,711 acre feet). They are served by the Burrinjuck Dam (capacity 771,640 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation is supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the flood irrigation districts of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembed Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate 840 miles and drainage channels 810 miles.

In addition 380 miles of supply channel run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control. The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations with a sparse population.

Population was 12,000 in 1923, 15,000 in 1929 and 20,000 at the 1947 Census. The population of the Yanco district (with Leeton as the centre) was then 9,000; and the population of the Mirrool Area (with Griffith at the centre) was 11,000.

(*b*) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas, also the electricity supply undertaking. Other local government services, including town water supply, are provided by Shire Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1947 was 338,121 acres, including 45,951 held for short lease grazing, agriculture, etc.

(*c*) *Production.* Since the scheme was inaugurated in 1911 the value of total production has aggregated £39,000,000. During the year ended 30th June, 1947, production was valued at £3,169,100. Live-stock contributed £653,100, comprising sheep, £353,500; cattle, £32,000; pigs, £20,000; wool, £191,600; and dairy products, £56,000.

Rice (£803,200) and other crops (£202,000) contributed a total of £1,005,200. Horticulture accounted for £1,090,500, comprising almonds, apricots, citrus; drying grapes, table grapes, wine grapes, figs and olives, peaches and nectarines, pears, plums and prunes, quinces and apples. The greatest individual contributions were made by grapes, £283,800, peaches and nectarines, £202,800 and citrus, £278,200.

The total value of all vegetables was £379,000, including root crops, £157,100, tomatoes, £105,600, peas and beans, £64,000, cabbages, cauliflowers, onions and other products.

A total of £41,300 represented the value of miscellaneous products.

(*d*) *Rice.* Rice growing was initiated in 1924. Since then aggregate production has been 783,500 tons valued at £8,360,000. In 1946–47 the acreage sown was 31,989, and the quantity of water delivered was 198,340 acre feet. Water supplied for rice represents about one-half of the total delivered in the areas and a fifth of the water artificially supplied for irrigation in New South Wales. Before the war the rice crop was more than sufficient for Australian requirements. During and after the war the area planted was increased to the limit of water available. Rice has also been grown in the adjoining districts of Benerembah and Tabbita, while in 1945–46, 21,389 acre feet was used for 4,104 acres of rice in the Wakool Irrigation District on the Murray, representing nearly half the water delivered. No rice was grown at Wakool for the 1946–47 season.

(*e*) *Co-operation.*. Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle 300,000 bushels of fruit per year (compared with 54,600 in 1927–28). Aggregate sales turnover of the Leeton cannery in the past five years was over £1,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

(ix) *Other Irrigation Areas.* The Curlwaa, Coomealla and Hay Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,550 acres of which 2,143 acres comprised irrigated holdings at 30th June, 1947. Production consists of dried vine fruits, deciduous fruits and fodder crops of a total estimated value of £113,872.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 35,450 acres of which 3,419 acres are occupied in the developed portion. Other land in the undeveloped part is leased for grazing. Production consists of vines, citrus and lucerne of an estimated value of £214,266. Vines account for 2,465 acres, citrus 240, and lucerne 29. Works are now under construction to provide 100 new farms for ex-servicemen.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which 1,028 acres are occupied as irrigated holdings. Annual production, valued at £18,775, comprises dairy products, fat lambs, sheep, wool and fodders.

(x) *Irrigation Districts.* These Districts are set up under the Water Act for (*a*) domestic and stock water supply and (*b*) irrigation. They differ from water trusts as the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following districts or provisional districts have been constituted :—

Irrigation District.	Area of Land Benefited.
	Acres.
Murray River—	
Wakool District (completed)	502,698
Berriquin Provisional District (almost complete)	625,494
Deniboota Provisional District (in progress)	303,064
Denimein Provisional District*	140,850
Jernargo Provisional District* (domestic and stock supply only)	130,850
Barramein Provisional District* (domestic and stock supply only)	88,651
Murrumbidgee River (completed)—	
Benerembah District	121,555
Tabbita	5,631
Wah Wah Provisional District	549,099
Lachlan River—	
Jemalong District (completed)	171,608
Wyldes Plains District (completed)	52,328
Total	2,691,828

* Works not yet commenced.

Since the completion of the Hume Dam several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the five million acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is water rights are allotted to holdings on the basis that only a portion of each holding (one acre in ten or twelve, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1947, 75½ miles had been constructed to those districts and a further length was under construction in the Deniboota District. Off-take capacity is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be constructed.

Wakool, with 340 miles of channel, contains 215 holdings and it is expected that the area developed by irrigation will comprise about one acre in 13 of the total area. The total area irrigated in 1946-47 was 35,256 acres and water supplied was 38,270 acre feet. Crops comprised fodders, pastures, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and it is expected that the proportion of total area to be developed for irrigation will be considerably higher than in the case of Wakool. Total irrigated acreage was 92,499. Sheep and wheat growing are main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1946–47 season for irrigation was 76,639 acre feet, and the area irrigated was 46,772 acres, including rice and other cereals, pastures and fodder crops. The estimated value of production, included in the amount (viz., £3,169,000) for the Murrumbidgee Irrigation Area, was £396,500, including wool, live-stock, wheat and oats and rice.

For the same season 25,987 acre feet of water was supplied from the Lachlan River o irrigate a total area of 21,474 acres within the Jemalong and Wyldes Plains Districts. The total estimated value of production was £521,000, including wool and lambs £415,000, calves and pigs £33,000, wheat, oats and other crops £32,000 and lucerne £41,000.

(xi) *Water Trust Districts.* The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted; the area in acres of each district is shown in parenthesis:—Murray River: Tuppal Creek (78,080), Bullatale Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,985), Minnie Bend Flood Prevention (2,190); Murrumbidgee River: Yanko, Colombo and Billabong Creeks (1,001,210); Lachlan River: Torriganny, Muggabah and Merrimajeel Creeks (170,240), Condobolin West Weir (4,480), Marrowie Creek (295,040), Ulonga (71,655), Micabil Weir (11,500); Miscellaneous: Algudgerie Creek (9,760), Nidgery Creek (46,880), Great Anabranch of Darling River (995,200), Collarenebri Water Supply (88), making in all a total area of 2,945,068 acres.

Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

(xii) *Irrigation Trusts.* These trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parenthesis):—Hunter River: Blairmore (511½); Murray River: Bama (3,446), Goodnight (1,364), Bungunyah-Koraleigh (1,785), Glenview (2,750½), Bringan (4,933); Darling River: Pomona (1,241½), making in all a total area of 16,031½ acres.

(xiii) *Flood Control and Irrigation.* The Lowbidgee Provisional Flood Control and Irrigation District (367,090 acres) was constituted in 1945, being the first of its kind. Its purpose is to provide flood irrigation for 140,000 acres on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 47 holdings. Another district (Medgun near Moree in the North-West) is being developed on similar lines.

(xiv) *Underground Water.* Extensive use is made of artesian, sub-artesian, and shallow underground water. Eighty thousand square miles in the north and western portions are covered by the Great Artesian Basin. Eighty Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover nearly five million acres and water is distributed through 3,285 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1947 was 876, and the estimated total daily flow from the 546 flowing bores was 65,849,000 gallons. The deepest bore is Boronga No. 2 (4,570 feet) which also has the greatest flow, namely, 1,115,360 gallons per day. Of the total number of bores sunk, 221 have been installed by the Government in connexion with public watering places. The estimated flow of all bores in 1914–15 was 99,350,419 gallons per day for 372 bores. In 1946–47 the flow had decreased to 65,849,000 gallons for 546 bores, confirming the similar experience of Queensland.

(xv) *Shallow Bores.* Since 1912 the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1947, the total constructed by the Commission's plants was 3,980 and their average depth was 293 feet.

(xvi) *Licences and Permits.* During recent years the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation has increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

(xvii) *Farm Water Supplies.* The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and financial assistance is made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

(xviii) *Future Programme.* The future programme envisages expenditure of £30,000,000 over the next 15 years to provide eighteen dams and storages, eight diversion weirs, flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter, Burrendong on the Macquarie, and a balance storage at Ballyrogan on the Lachlan. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. Total estimated storage of all proposed new storages is 5,500,000 acre feet.

(xix) *Hydro-electricity.* The Nymboida hydro-electric scheme was opened in 1924 with an initial capacity of 800 k.w. to supply Grafton, South Grafton, and Ulmarra over a transmission line of 31 miles. The Nymboida power station is situated on a tributary of the Clarence River in Northern New South Wales and now has a capacity of 5,600 k.w. The station now operates in conjunction with a diesel station at Lismore and an associated transmission network to provide supply throughout the north-eastern area from Kyogle in the north to Kempsey in the south, a distance of some 200 miles north and south. In 1946 the system was inter-connected with the Department of Railways system based on Newcastle. The Nymboida system is controlled by the Clarence River County Council.

The Bega Valley scheme was opened in 1944 to supply an area of 2,700 square miles extending from Bermagui to Eden. The power is derived from the waters of Rutherford Creek, a tributary of the Bemboka River, and the capacity of the present installation is 500 k.w. Two 750 k.w. generating units are to be installed in conjunction with a further development on George's Creek, another tributary of the same river, and a comprehensive programme of rural electrification has been initiated. This system is controlled by the Bega Valley County Council.

Wyangala Dam power station was brought into operation in 1947. This station, with an installed capacity of 7,200 k.w., utilizes the irrigation waters released from the dam to generate electricity, and in addition is designed to provide an essential stabilizing feature in the transmission system between Burrinjuck and Lithgow, to which the station is interconnected. The output of the station at any time is dependent on the release of water for irrigation purposes.

Major hydro-electric developments which are being investigated by the New South Wales Government are the developments on the Clarence River at the Gorge, and the development of the Shoalhaven River for irrigation, water supply and hydro-electric purposes.

The Clarence Gorge scheme, situated 140 miles from Brisbane and 240 miles from Newcastle, embraces not only hydro-electric development, but also may offer considerable benefits by reason of the flood mitigation effects of a large dam built at this location. It has been suggested that a dam 200 feet high would impound some two million acre feet and might enable the production of as much as 75,000 k.w. The Queensland Government is also interested in the proposal from the aspect of obtaining additional energy to assist the Brisbane Metropolitan System and to extend rural services to south-eastern Queensland.

The Commonwealth and States agreed in 1945 on hydro-electric development at the Hume Dam. This proposal is associated with the intention to increase the capacity of this dam to two million acre feet. An initial installation of two 21,000 k.w. water turbine generators has been proposed.

2. **Victoria.**—(i) *Rainfall.* While the annual average rainfall of Victoria is 24 inches, it ranges from 10 inches in the far north-west to over 70 inches in southern and eastern districts. Of the State's area of 87,884 square miles 22.4 per cent. has an average below 15 inches and 37.6 per cent. receives less than 20 inches. Over 40 inches is received by 10.4 per cent. of the State. There is also a substantial year to year variation. For example, the average in 1889 was 32.77 inches; in 1902, 18.55; in 1914, 14.66; in 1917, 30.77; and in 1927, 18.56. Victoria is fortunate, however, in having (in common with New South Wales) access to the high rainfall and the snows of the lofty south-east highlands in which rises the Murray River.

(ii) *Administration.* As indicated earlier, practical steps were taken to organize Victoria's resources before the turn of the century but the passage of the Water Act in 1905 marked the commencement of sustained progress. The State Rivers and Water Supply Commission established by this Act is vested with the control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally-constituted Waterworks Trusts or Local Governing Bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and Local Governing Bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

(iii) *General.* Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 1,969,970 acre feet (including Victoria's share of the Hume Dam). By means of channels, bores, etc. one-fourth of the State is artifically supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 110,000 acres in 1906 to 708,000 acres in 1947, and irrigation channels command 2,000,000 acres.

The Commission controls 35 large reservoirs and 225 subsidiary storages. Irrigation channels extend 4,404 miles; domestic and stock channels, 8,390 miles and drainage and flood protection channels, 2,144 miles, a total of 14,938 miles. In addition the Commission controls 1,120 miles of piping, comprising 258 miles of mains and 862 miles of reticulation. Farm holdings served with water total 39,383. Urban districts supplied by the Commission's channels and pipelines contain 134,460 persons in 127 towns, and a further 132 towns with a total population of 313,190 persons are supplied by Trusts under the supervision of the Commission.

To 30th June, 1947, the total capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £34,000,000, one-half of which is in respect of irrigation.

The total capital liability in respect of irrigation, rural water supply, flood protection and drainage is £23,500,000, all of which is borne by the State, and for country town water supplies the total capital liability is £6,900,000, of which £4,300,000 is borne by the State and the balance by the ratepayers in the various towns.

(iv) *Production.* The influence of irrigation on Victorian production is illustrated by the following estimates prepared by the Commission of the value of production from irrigated areas:—1905–6, £500,000; 1925–26, £5,000,000; 1945–46, £12,000,000. A classification of 1945–46 production (gross values on the farm) follows:—Farm Products—Cereal, Hay and Grass Seeds (£700,000), Dried Vine Fruits (£2,400,000); Horticultural—Citrus (£700,000), Deciduous Fruits (£1,300,000), Vegetables (£1,000,000); Livestock—Dairying (£3,200,000), Other Cattle (£250,000), Pigs (£300,000), Sheep, Lambs and Wool (£1,600,000), Poultry (£500,000), Miscellaneous (£50,000); Total £12,000,000.

Although the area irrigated is less than 2 per cent. of the State, it yields approximately 16 per cent. of Victoria's rural production. The following table indicates the crops under irrigated culture, and the total land irrigated :—

LAND UNDER IRRIGATION CULTURE: VICTORIA, 1946-47.

(Acres.)

System.	Area of Districts.	Area Irrigated, including Lands adjoining a District.									
		Cereals.	Lucerne.	Other Fodder Crops.	Pastures. Sown.	Pastures. Natural.	Vineyards.	Orchards.	Market Gardens.	Fallow and Miscellaneous.	Total
Goulburn	1,253,118	46,478	34,669	7,294	191,068	34,477	462	20,912	5,569	4,115	345,0
Murray—											
Torrumbarry Weir ..	370,856	15,252	12,588	3,914	83,447	69,285	4,562	2,241	1,635	3,075	195,9
Yarrawonga Weir ..	269,334	15,070	3,294	708	7,383	3,539	31	1,785	518	2	32,3
By Pumping ..	45,180	117	288	137	109	145	20,363	1,075	210	68	22,5
Total	685,370	30,439	16,170	4,759	90,939	72,969	24,956	5,101	2,363	3,145	250,8
Loddon and other Northern Systems ..	(a)19,725	2,157	973	254	3,057	1,306	67	4,690	1,602	1,009	15,1
Southern Systems ..	69,278	108	3,782	522	27,050	1,122	..	545	3,246	503	36,8
Mildura and Private Diversions	(b)44,000	4,081	14,106	4,828	14,708	4,183	13,550	3,076	1,814	366	60,7
Grand Total ..	2,071,491	83,263	69,700	17,657	326,822	114,057	39,035	34,324	14,594	9,138	708,5

(a) Area of Campaspe District only. (b) Area of First Mildura Trust District only.

(v) *Main Irrigation Systems.* (a) *General.* The capacities of total storages (1946–47) are shown below in acre feet.

> *Goulburn System*—Eildon Weir, 306,000 ; Goulburn Weir, 20,700 ; Waranga Basin, 333,400 ; *Murray–Loddon System*—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 736,420 ; Kow Swamp, Laanecoorie, Kerang North and West Lakes, Lake Boga and Lake Cullulleraine, 148,210 ; total, 884,630. *Wimmera–Mallee*—206,480 ; *Maffra–Sale*—104,540 ; *Coliban*—58,850 ; *Werribee*—34,900 ; *Bellarine Peninsula*—10,800 ; *Mornington Peninsula*—5,800 ; *Otway*—1,080 ; *Miscellaneous*—2,790 ; *Total*—1,969,970.

(b) *Goulburn.* The Eildon and Waranga Reservoirs, on the Goulburn River, supply half the irrigated acreage, and form the largest system in Victoria. Annual rainfall in the valley is only 18 inches and the annual discharge has varied from 567,000 acre feet in a drought year to 6,202,171 acre feet in a particularly wet season. Total regulated supply is 960,100 acre feet, comprising 660,100 held in storages and 300,000 divertible direct from the river.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District.

Waranga has been formed on the site of a natural swamp by the construction of an earthen embankment 4½ miles long, creating a reservoir covering 23 square miles to an average depth of 31 feet. Two main outlet channels issue from this reservoir, one serving the western part of the Rodney district; while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 202,400 acres east of the Goulburn; 608,350 acres between the Goulburn and Campaspe; 445,100 acres between the Campaspe and Loddon Rivers; and 79,900 acres west of the Loddon—a total of 1,335,750 acres. Main channels of the system have a total length of 213 miles and in addition there are 2,344 miles of distributaries, a total of 2,557 miles for the whole system.

The development of the fruit-canning industries in the Goulburn Valley is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—aggregates 55,000,000 tins. This represents 70 per cent. of Australia's total production of canned peaches, pears and apricots. Other main products of the Goulburn districts are fat lambs, fodders, wine and table grapes and dairy products.

(*c*) *Murray River.* The waters of the River Murray are used to supply an area of more than 500,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, excepting Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, supplied from Yarrawonga, will serve 400,000 acres when completed At 30th June, 1946, 220 miles of main and distributary channels were completed and supplied 98,000 acres west of Yarrawonga.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 415,500 acres with 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year. A lock enables the passage of small river craft. The weir comprises an original design evolved by Mr. J. S. Dethridge, comprising a series of steel trestles running on a concrete foundation and provided with wooden drop bars to keep the river up to diverting level. In flood times the bars are removed and the trestles are drawn out of the stream.

Red Cliffs Irrigation District comprises 31,000 acres. At present 11,300 acres are irrigated. This ranks first in importance among Victoria's pumping schemes. A system of main and distributary channels commands every holding in the district. The total length of channels is 125 miles, of which 115 have been lined with concrete for more efficient distribution. Effective drainage is provided by 85 miles of sub-surface drains and 5 miles of open drains. The district, originally for soldier settlement, has been subdivided into 700 blocks. The area planted comprises 11,000 acres of vines and citrus. The first harvest (1924) returned 570 tons of dried fruit in addition to table grapes. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 10,350 acres and contains 436 holdings averaging 24 acres each. The main and distributory channels have a length of 54 miles, and most are lined with concrete. A reticulated pipe system supplies the town of Merbein, and the pumps also supply the Yelta Waterworks District of 51,200 acres.

Nyah Irrigation District is supplied with water diverted from the Murray by a high-lift pumping plant. Total length of channels, nearly all of which are lined with concrete, is 34 miles. They serve 3,800 acres in 220 holdings devoted mainly to orchards and vineyards.

(*d*) *Mildura.* The First Mildura Irrigation Trust—which is the only Irrigation Trust operating in Victoria—controls an area of 44,000 acres, of which 12,755 acres are irrigated. This area irrigated includes 11,320 acres of vines, 600 acres of citrus trees and small areas of apricots, peaches, prunes, figs, almonds, olives, lucerne and other fodders. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels, approximately half of which are concrete lined to reduce seepage. Effective drainage is provided by 100 miles of sub-surface pipe drains which vary in size from 4 inches to 36 inches. The depths of the drains vary from 4 feet 6 inches—the minimum necessary to ensure satisfactory drainage of the root systems of the plants—to obtain the required grade. The present steam-driven pumping plants, which have a combined capacity of 200 cubic feet per second, include some plant installed by the Chaffey Brothers in 1890, but steps are now being taken to replace this with new units. The area produces approximately 15,000 tons of raisins, currants and sultanas each year.

(*e*) *Wimmera-Mallee System.* The Wimmera–Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from five reservoirs at the foot of the Grampians mountains with a capacity of 206,480 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 90,000 acre feet of water is distributed through 6,600 miles of open channel and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. At least 16,000 tanks are served. In addition forty-five towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storages, 3,000 acres are irrigated for soft fruits and pastures, but the limited water resources available will not permit any extension of irrigation.

The northern part of the system is affected by sand drifting into the channels, and in 1945, which was a year of extremely dry weather conditions, the effects of the drought were accentuated by unwise farming methods and overgrazing and it became necessary for the Commission to remove 12,000,000 cubic yards of sand from the channels.

Water distribution, sand removal, and other costs of this water supply system over the past 10 years have averaged £233,000 per annum, which represents 8d. per acre of the area of lands actually supplied with water. The cost of removing sand drift from the channels, which is included in this figure, has averaged £119,200, ranging from £70,000 to £323,000. This represents 4d. per acre per annum, which is 50 per cent. of the total maintenance costs of the whole system.

It is considered that a substantial reduction of the maintenance costs of this system could be obtained by better farming methods, particularly the cessation of the practice of burning stubble after harvesting, the elimination of overgrazing and improvements in fallowing methods. Efforts in this direction, including the use of recently given compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country, have already resulted in marked savings in maintenance costs—the cost of sand drift removal for 1947 being reduced to £90,000.

(vi) *Farm Water Supplies.* The Farm Water Supplies and Drainage Advances Act (1944) is designed to give farmers an opportunity of establishing or improving domestic and stock water supplies on their farms. Advances are made by the Board of Land and Works in approved cases to farmers who cannot finance works to supply water to their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams. Advances are repayable over a period not exceeding ten years. The amount advanced may not exceed seven-eighths of the total cost of construction.

The Farm Water Supplies Branch has been set up by the State Rivers and Water Supply Commission to administer the Act and advise farmers even if finance is not required. A comprehensive booklet entitled "Farm Water Supplies for Domestic and Stock Purposes" has been issued concerning the scheme. It contains general advice on farm water supplies and plans of typical structures and layouts.

(vii) *Underground Resources.* A comprehensive survey of the underground water resources of Victoria has been commenced. It will compile records of bores in the Mallee, Wimmera and Glenelg regions, and provide a detailed description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and at Bacchus Marsh where a number of observation bores have been installed.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies in different parts of the basin. Over 300 bores exist in this State, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

(viii) *Future Programme.* Victoria has now reached the stage when the demand for water is far greater than the supply, and a programme which envisages an expenditure of £25,000,000 has been launched. This includes the Rocklands storage on the Glenelg River (264,000 acre feet) and the Cairn-Curran Reservoir on the Loddon (120,000 acre feet). Investigations have also reached an advanced stage concerning a proposed enlargement of the Eildon Reservoir on the Goulburn from 306,000 to 2,350,000 acre feet by the building of a large earthen embankment 250 feet high and 3,300 feet long at an estimated cost of £9,600,000. This would be Australia's greatest storage.

(ix) *Hydro-Electricity.* The Kiewa project in the Australian Alps is the largest single hydro-electric development in Australia. The Kiewa River is a tributary of the Murray. In 1937 approval was given by the Victorian Parliament for a scheme comprising four power stations with a total installed capacity of 117,000 k.w. Owing, however, to war-time shortage of material and labour, completion of this scheme has been much delayed. No. 3 station with an installed capacity of 24,000 k.w. began operating in 1944. Work is now in progress on No. 4. Since 1937, further investigation of the water-power resources of the area, particularly in the upper levels, has revealed the practicability of a large-scale extension of the scheme, with an increase in total installed capacity to 289,000 k.w. Proposals for such an enlargement are the subject of a report dated 21st November, 1947, which was submitted to the Victorian Government by the State Electricity Commission of Victoria. Basic both to the 1937 project and to the new proposals for a larger scheme are the storages at Pretty Valley and Rocky Valley on the Bogong High Plains. In the 1937 project these storages were to have been 95,000 acre feet and 13,000 acre feet respectively. Under the later proposals they are likely to be very substantially enlarged.

The Sugarloaf-Rubicon scheme was completed in 1928 and comprises five stations with an installed capacity of 26,500 k.w. Sugarloaf station on the Goulburn River is situated at Eildon Weir, which impounds 300,000 acre feet and serves extensive irrigation, domestic and stock districts. Power is generated at Sugarloaf during the summer months, when water is being released for irrigation, or when storage is full at other times. The four associated mountain stream stations on the Rubicon and Royston Rivers generate maximum power in the winter and spring, when water flow is at its greatest.

3. **Queensland.**—(i) *Rainfall.* The area of Queensland is 670,500 square miles. More than half the State (359,000 square miles) is in the tropics. Average rainfall varies from 5 inches in the south-west corner to falls exceeding 160 inches on the north-east coast, where the highest precipitation in Australia is recorded. Every part of Queensland receives the greater proportion of its rainfall in the six hottest months. Variability increases in proportion to the distance from the coast.

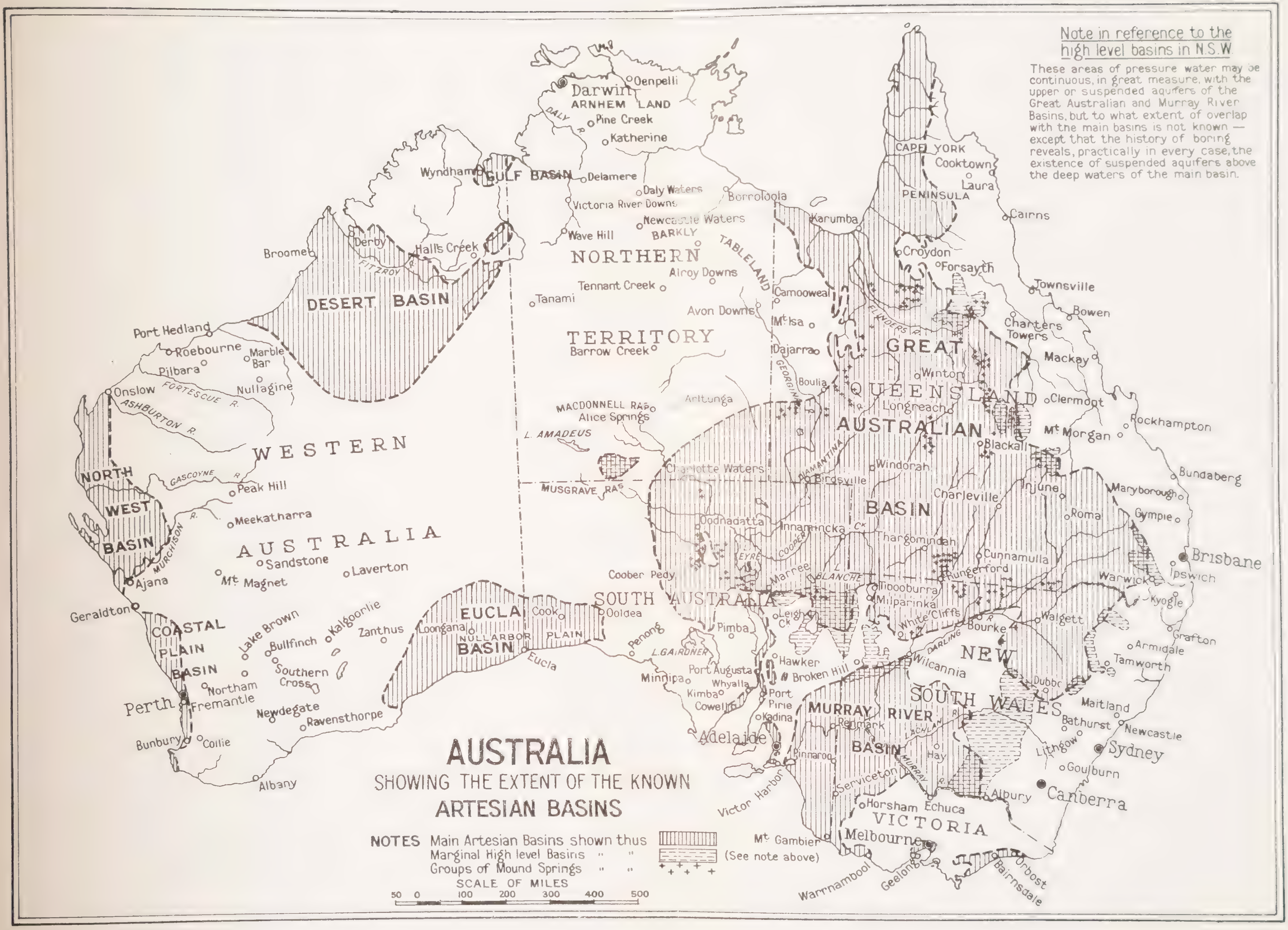
Areas which receive an annual average rainfall of less than 10 inches approximate 13 per cent. of the State; while 27.4 per cent. receives less than 15 inches; 47.1 per cent. less than 20 inches; and 65.9 per cent. less than 25 inches. Of the remaining 34.1 per cent. receiving 25 or more inches, 22.5 per cent. receives 30 or more inches.

(ii) *Administration.* The first comprehensive Water Act in Queensland was the Rights in Water and Water Conservation and Utilization Act of 1926. The Irrigation Act of 1922 made special provision for development of irrigation projects. From 1922 to 1931 these acts were administered by a Commissioner of Irrigation and Water Supply, but in 1931 the Land Administration Board was appointed to act as the Commissioner, and this continued until the Irrigation and Water Supply Commission Act of 1946 was proclaimed in 1947. Under this Act, the Corporation of the Commissioner of Irrigation and Water Supply was reconstituted. The Commissioner is responsible for carrying out the provisions of the Irrigation Acts 1922 to 1934 and the Water Acts 1926 to 1942. He is also responsible for investigations and planned development of water resources under the Land and Water Resources Development Acts 1943 to 1946.

(iii) *General.* Queensland's predominant interest in the past has been water for stock and domestic purposes in its great pastoral areas which contain half the Commonwealth's cattle, a fifth of the sheep and a third of the horses. More than half the State's rural production is derived from cattle and sheep. The cattle are spread throughout the State, but most thickly along the wet eastern coastline. The sheep are mainly pastured on the inland areas which form part of the Great Artesian Basin. Most of the dairy cattle are south of the Tropic of Capricorn along the moist coastlands and on the Darling Downs. Consequently, great interest has been concentrated on the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock. More recently, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meatworks and markets has become an important aspect in the utilization of water resources.

The State's agricultural crops differ from those of other States in that a large proportion are tropical. Sugar is the greatest individual crop, representing in 1946-47 about 40 per cent. of total agricultural production. Approximately 11 per cent. of the sugar cane acreage is irrigated and represents more than half the irrigated acreage of Queensland.

(iv) *Control.* Following the lead given by the Victorian Water Act of 1905, the Rights in Water Act of 1910 abolished the old common law riparian rights and vested in the Crown the right to the use and flow and control of the water in watercourses, lakes and springs which flow through or past or form part of the land of two or more occupiers. This principle has passed unchanged into the current Acts. Artesian, sub-artesian and any other subterranean waters are also vested in the Crown. The Acts also provide that the bed and banks of any watercourse or lake forming the boundary wholly or in part of any alienated land shall remain the property of the Crown. Except for the general right of persons to use water for domestic and ordinary use and for watering stock, no person, except under licence, may divert or appropriate any water from a watercourse, lake or spring. In addition, riparian owners may use water for a garden connected with a dwelling, but must obtain the Commissioner's consent to construct any works required.


AUSTRALIA
SHOWING THE EXTENT OF THE KNOWN
ARTESIAN BASINS
NOTES Main Artesian Basins shown thus
Marginal High level Basins " " (See note above)
Groups of Mound Springs " "
SCALE OF MILES
50 0 100 200 300 400 500
Note in reference to the high level basins in N.S.W.
These areas of pressure water may be continuous, in great measure, with the upper or suspended aquifers of the Great Australian and Murray River Basins, but to what extent of overlap with the main basins is not known — except that the history of boring reveals, practically in every case, the existence of suspended aquifers above the deep waters of the main basin.
WESTERN AUSTRALIA
NORTHERN TERRITORY
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
DESERT BASIN
GULF BASIN
NORTH WEST BASIN
COASTAL PLAIN BASIN
EUCLA BASIN
NULLARBOR PLAIN
GREAT AUSTRALIAN BASIN
MURRAY RIVER BASIN
CAPE YORK PENINSULA
ARNHEM LAND
BARKLY TABLELAND
MACDONNELL RAS
MUSGRAVE RAS
L. AMADEUS
L. EYRE
L. BLANCHE
L. GAIRDNER
Darwin
Oenpelli
Pine Creek
Katherine
Wyndham
Delamere
Daly Waters
Victoria River Downs
Borroloola
Wave Hill
Newcastle Waters
Derby
Broome
Hall's Creek
Tennant Creek
Alroy Downs
Tanami
Avon Downs
Barrow Creek
Arltunga
Alice Springs
Charlotte Waters
Port Hedland
Roebourne
Marble Bar
Pilbara
Nullagine
Onslow
Peak Hill
Meekatharra
Sandstone
Laverton
Mt Magnet
Ajana
Geraldton
Lake Brown
Kalgoorlie
Zanthus
Bullfinch
Southern Cross
Northam
Perth
Fremantle
Newdegate
Ravensthorpe
Bunbury
Collie
Albany
Loongana
Cook
Ooldea
Eucla
Coober Pedy
Oodnadatta
Penong
Pimba
Port Augusta
Whyalla
Minnipa
Kimba
Cowell
Port Pirie
Kadina
Adelaide
Victor Harbor
Hawker
Broken Hill
Leigh Ck
Marree
Innamincka
Birdsville
Tibooburra
Milparinka
White Cliffs
Wilcannia
Renmark
Pinnaroo
Serviceton
Horsham
Echuca
Mt Gambier
Melbourne
Warrnambool
Geelong
Bairnsdale
Orbost
Albury
Hay
Canberra
Goulburn
Sydney
Lithgow
Bathurst
Newcastle
Maitland
Dubbo
Tamworth
Armidale
Grafton
Kyogle
Ipswich
Brisbane
Walgett
Bourke
Hungerford
Cunnamulla
Thargomindah
Warwick
Roma
Injune
Charleville
Windorah
Gympie
Maryborough
Bundaberg
Rockhampton
Mt Morgan
Blackall
Clermont
Longreach
Winton
Mackay
Charters Towers
Bowen
Townsville
Boulia
Dajarra
Mt Isa
Camooweal
Forsayth
Croydon
Karumba
Cairns
Laura
Cooktown
FITZROY R.
FORTESCUE R.
ASHBURTON R.
GASCOYNE R.
MURCHISON R.
DALY R.
GEORGINA R.
DIAMANTINA R.
COOPER CK
FLINDERS R.
DARLING R.
LACHLAN R.
MURRAY R.

This map was re-drawn from that published in the Report of the Fifth Interstate Conference on Artesian Water, Sydney, 1928.

(v) *Great Artesian Basin.* (*a*) *General.* Western lands beyond the 22 inch rainfall belt are predominantly pastoral. Westerly-flowing rivers and interior streams do not generally lend themselves to large surface storage, but use of relatively shallow underground water on the river plains and small surface storages, wherever possible, is of great importance. In areas where artesian, sub-artesian, or surface water is not readily available excavated storage tanks up to 30,000 cubic yards capacity have been provided.

By far the most important factor in the development of the western pastoral areas of Queensland has been the Great Artesian Basin. This basin covers an area of some 350,000 square miles in Queensland and extends into New South Wales, South Australia and the Northern Territory. The supplies of this basin were first tapped by bores in 1884, and in 1946–47 some 2,071 bores were operating and represent a total of 3,145,054 feet of drilling.

If sub-artesian bores are added, total bores registered in the Basin would exceed 10,500 and the footage drilled about six million feet. Artesian water is usually distributed from the bores by small "delver" channels for the use of stock, and, on an average, 10,000 gallons per day are needed to serve one mile of channel or drain. Owing to evaporation and soakage, less than 5 per cent. of the water at the bore head is actually available for use by stock.

The falling off in the supplies from the bores of the Great Artesian Basin has been very noticeable since 1914, and in 1939 a Special Committee was appointed to enquire into the geology and hydrology of the Basin and the methods of utilization of its resources. A first progress report has been issued by this Committee. (*See* page 1103.)

(*b*) *Bore Areas.* The constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at costs beyond individual capacity and to conserve artesian supplies. Loans are made for acquisition of existing, or drilling of new, bores. The total number of areas is 67 and the length of drains served is 3,042 miles. At present, 20 of these areas are still under local Bore Area Boards and the balance are administered by the Commissioner. Water facilities such as bores, excavated and storage tanks, windmills and troughing, are also subsidized by the Government to make water available on dry stages of stock routes.

Additional information on underground sources in dry areas outside the artesian basin was obtained during the war when it became necessary to provide water along the new Mount Isa (Queensland) to Tennant Creek (Northern Territory) strategic highway, 403 miles long, of which 200 miles passed through country previously regarded as waterless. Twenty-two bores which were put down and equipped with pumping plant now deliver from 100 to 3,600 gallons per hour.

(vi) *Irrigation.* With the exception of the Dawson Valley Scheme, orthodox irrigation projects served by a channel system have not so far been constructed. Supplies for irrigation are pumped from streams or from natural underground storages. Most of this has been by private farmers operating under licence, and irrigation as a means of stabilizing production is receiving more and more attention, because even in the areas of high rainfall most of the precipitation is received from January to March. More than half the Queensland irrigators use internal combustion engines, but wherever it is available electricity is the more popular medium. The largest areas using electricity for pumping are in the Townsville–Burdekin areas and the south coast (near Brisbane). In the south-east, where the main crops are vegetables and fodders, spray lines are largely used, but in the northern districts growing sugar cane and maize, furrow irrigation is predominant.

Of the total area irrigated in the year ended 31st March, 1947 (79,030 acres), irrigated sugar lands accounted for 40,558 acres, of which 8,343 acres were located in the Maryborough district of Southern Queensland and 29,689 acres in the Townsville district of North Queensland.

The following table shows for each division of the State the area and principal crops irrigated for the year ended 31st March, 1947.

IRRIGATED AREAS : QUEENSLAND, YEAR ENDED 31st MARCH, 1947.

Division.	No. of Irrigators.	Total Area Irrigated.	Principal Crops Irrigated.						Irrigated Pastures
			Vegetables.	Fruit.	Sugar Cane.	Tobacco.	Cotton.	Other Crops.	
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Southern Queensland ..	2,592	38,649	12,287	1,653	8,345	761	129	14,831	643
Central Queensland ..	258	3,016	702	152	6	1	179	1,904	72
Northern Queensland ..	1,172	37,365	3,452	512	32,207	789	38	309	58
Whole State ..	4,022	79,030	16,441	2,317	40,558	1,551	346	17,044	773

Growth of irrigation is illustrated by the following figures :—the total area of land irrigated in 1906 was 9,922 acres ; in 1916, 10,886 acres : in 1926, 24,250 acres ; in 1936–37, 44,509 acres; and in 1940–41, 60,961 acres.

Queensland irrigation practice bears little comparison with the pattern of southern States and it is interesting therefore to mention briefly the more important developments in tropical and sub-humid areas.

(vii) *Lockyer Valley.* West of Brisbane and within 50 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. It is actually an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying considerable quantities of water suitable for irrigation. Although the rainfall averages 30 inches the year to year variation is considerable, and irrigation is necessary for continued fodder production. Recent surveys suggest that some 60,000 acres of good irrigable land are available. At present, 9,000 acres are irrigated by 464 well pumps and 6,000 acres by pumping from open water in the Lockyer Creek and its tributaries. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage electrified irrigation is pursued by the City Electric Light Company which serves the Valley. The Irrigation and Water Supply Commission has also constructed a number of small weirs on Lockyer Creek with a total storage capacity of 1,370 acre feet. These also tend to augment and conserve underground supplies. Though the Valley contains less than 5 per cent. of the State's cultivated area, it produces a third of Queensland's potatoes, practically all its onions, a fifth of the lucerne hay, a quarter of the green fodder (excluding oats), a quarter of the pumpkins, a tenth of the maize, and contributes a substantial quantity of dairy products. To study local problems an Irrigation Research Station has recently been established at Gatton Agricultural College.

(viii) *Burdekin River.* This large northern river joins the sea between Townsville and Bowen. Heavy floods are experienced in summer, but the flow decreases substantially in winter. In the Delta area the annual rainfall is about 41 inches, but the major part falls in the months December to March. Consequently, sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies of water in the dry periods. Sugar is the main irrigated crop, but citrus, pineapples and vegetables are also irrigated. Irrigated acreage is 30,000 acres, and approximately 1,000 acre feet are drawn daily from underground sources.

The Home Hill-Inkerman irrigation areas are served by an electricity scheme unique in Australia. The electricity scheme was originally established by the irrigation authorities in 1921, transferred to the Inkerman Irrigation Board in 1933, and is now controlled by the Townsville Regional Electricity Board. The load demand at Home Hill is basically a demand for irrigation. The load totals 3,000 k.w. between 7 a.m. and

7 p.m., when the farmers are irrigating and this occurs for 110 to 290 days per year. Since all irrigation in the district is on the furrows system, unrestricted hours of electricity supply are being considered. Water is pumped from shallow wells by electric pumping units. In the Ayr district individual plants, including windmills, are extensively used.

The following table illustrates the relationship between electricity and water in the Home Hill–Inkerman area in years exhibiting wide variations in rainfall.

Year.	Rainfall.	Area Watered.	Total power sold for Irrigation.	Water Pumped per Acre.	Days of Watering.
	Inches.	Acres.	Units.	Acre Feet.	No.
1934–35..	10.21	6,405	3,710,000	2.47	290
1935–36..	56.84	6,117	2,740,000	1.91	213
1937–38..	21.59	6,793	3,735,000	2.35	266
1945–46..	35.00	6,158	2,715,678	1.87	237

The Burdekin River Trust was established in 1940 to safeguard the sugar areas of the Delta from erosion and floods. A farm established by military authorities during the war has recently been converted into an Irrigation Research Station to study the development of pastures under tropical conditions.

A major multi-purpose scheme, involving irrigation, flood control and electric power, is being investigated with a view to assisting the stabilization of the meat industry through provision of adequate irrigated pastures for fattening purposes. Aerial and ground surveys suggest that 400,000 acres might be irrigated from a head storage 99 miles from the mouth. A long range development programme, based on the possibility of storing 4,000,000 acre feet, is being examined.

(ix) *Dawson Scheme.* This scheme, south-west of Rockhampton, aimed at an extensive development of the resources of the Dawson River. The scheme, as originally proposed, consisted of a large dam at Nathan's Gorge (capacity 2,500,000 acre feet) and a diversion weir and other works to distribute water to some 70,000 acres. However, the large dam was not built and irrigation is practised at Theodore only. This area is served by two timber weirs with a combined capacity of 11,000 acre feet. Water is pumped from the weir at Theodore and supplies 2,000 acres through 28 miles of earth channels. Pastures, vegetables, cotton, agricultural produce and dairy products represent the main production. A cheese factory has been established at Theodore and, with the increase in dairying based on irrigated lucerne, the future of the scheme seems much more secure that it did a few years ago. Many of the earlier mistakes are being corrected and the development of permanent pastures as part of a programme to stabilize fat stock production will be an important factor in its growth.

(x) *Tobacco.* Tobacco crops are irrigated almost to the extent of available water in the Texas and Inglewood areas of southern Queensland, and, to a smaller extent, at Mareeba in North Queensland. It is proposed to construct weirs in the Inglewood area. Also, proposals for a dam at Walsh River (10,000 acre feet capacity) to irrigate 3,000 acres of tobacco and 2,000 acres of alternative crops are being examined.

(xi) *Bureau of Investigation.* Under the land and Water Resources Development Act of 1943, the Commissioner of Irrigation and Water Supply was directed to prepare comprehensive plans for the development of the water resources of the State. Also, a Bureau of Investigation has been established under the Act for the co-ordinated investigation of land and water resource development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture and the chairman is the Co-ordinator General of Public Works.

Preliminary reports issued by the Bureau suggest the feasibility of storing considerable quantities of water in the eastern part of the State. However, prospects for storing large quantities in the western areas are not promising. The Bureau considers, as a result of investigations, that a major feature of large-scale irrigation works will be pasture development. Surveys have been carried out to determine possibilities of using underground and surface supplies in a number of river valleys, including the Condamine, Callide and Burnett Rivers.

(xii) *Channel Country.* Extensive investigations of the "Channel Country" fed by the western inland rivers in the south-west corner are being carried out. This country has an extraordinary topography, being intersected by deep and irregular flood channels through which millions of gallons of flood waters pass. The stabilization of water supplies would permit the depasturing of thousands of cattle travelling to coastal markets from the Barkly Tablelands. Therefore, the possibility of developing storages to create artificial floods when most needed for pasture and water purposes is being closely investigated.

(xiii) *Bradfield Scheme.* The late Dr. J. J. C. Bradfield hoped to overcome natural climatic disabilities of the Lake Eyre Basin (South Australia) and Western Queensland by diversion of North Queensland rivers to the inland slopes. His schemes were based to some extent on the theories of Mr. E. T. Quayle, a meteorologist who contended, *inter alia*, that evaporation from new water surfaces aggregating 20,000 square miles would provide an additional annual rainfall of 4 inches over 500,000 square miles. The scheme has been closely examined by the Chief Engineer of the Stanley River Works Board (Mr. W. Nimmo) in the light of information gained during and since the war in the form of military contour maps produced from aerial surveys, ground surveys and extended records of rainfall and stream flow. His report to the Queensland Government in 1947 contends that portions of the scheme are physically impracticable, and that, for example, the major dam proposed by Dr. Bradfield at Hell's Gate on the Burdekin River could not be built to the height of 400 feet as he suggested, the practicable limit being 300 feet. Even if it could be built to 400 feet the surface level would be insufficient to permit a reasonable diversion to the Flinders. The report considers that water might be diverted from a smaller part of the Burdekin catchment through a conduit 200 miles long, half being by tunnel with a small gradient and lined with concrete. The cost of this modified scheme would be approximately £100,000,000 compared with £40,000,000 mentioned by Bradfield. In addition, the Nimmo report indicated that half the available flow of the Tully River has already been hypothecated for hydro-electricity, while the whole is likely to be used ultimately for this purpose. Furthermore, the Queensland Government is considering a large storage on the Burdekin for coastal use. A description of the Bradfield Plan appears in the eight Report of the Rural Reconstruction Commission on Irrigation, Water Conservation and Land Drainage (1945).

(xiv) *Hydro-Electricity.* High seasonal rainfall, variability and small catchments combine against the exploitation of water resources for hydro-electric generation, but the Queensland Government has planned development among the streams of the Cairns–Ingham area. The Barron Falls scheme came into operation in 1935, utilizing a head of 410 feet 14 miles north-west of Cairns. Present installed capacity comprises three 2,000 h.p. water turbines. The district receives supply by means of a 22,000 volt transmission network. Average rainfall varies from 80 inches to 150 inches along the ranges of the catchment to less than 35 in the western portion. There is an extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. As the river is not sufficiently entrenched to provide good dam sites, no large storages have been provided. During periods of low water flow electricity demands are supplemented by fuel plant.

As the result of an investigation in 1944 it is also proposed to develop the Tully River at Tully Falls, 80 miles south of Cairns and 120 miles north-west of Townsville. Initial development provides for a small dam and generating station of about 17,000 k.w. capacity, while ultimate capacity, using full storage, will be about 45,000 k.w. The Tully has characteristics similar to the Barron.

Other northern schemes which have been investigated include Freshwater Creek (3,500 k.w.); North Johnstone and Russell Rivers (30,000 k.w.); and South Johnstone River (25,000 k.w.). Development will be determined by future demands.

A small hydro-electric scheme is installed on the Mossman River, 5 miles from Mossman, North Queensland. Utilizing a head of 200 feet, two 120 h.p. water turbine sets are installed. Further development is not possible owing to lack of water storage to cope with dry periods.

The Somerset Dam, a few miles above the confluence of the Brisbane and Stanley Rivers (in South Queensland), is almost complete. Storage capacity will be 724,000 acre feet. The estimated cost, £2,000,000, is being shared between the Government and the cities of Brisbane and Ipswich. The dam is designed for flood mitigation and to stabilize the Ipswich and Metropolitan water requirements. Plans provide for a 3,000 k.w. hydro-electric plant using a head of 80 feet.

4. **South Australia.**—(i) *Rainfall.* South Australia has an area of 380,000 square miles of which 312,000 have an arid climate, 53,000 a semi-arid climate, and the remaining 15,000 (or 4 per cent.) a sub-humid or humid climate. Annual average rainfall varies from under 5 inches in Lake Eyre Basin to 46 inches in the Mount Lofty Ranges skirting Adelaide, and 96 per cent. of the State receives less than 20 inches. Evaporation losses range from 36 to over 100 inches. In the lower northern and mid-northern agricultural areas evaporation averages 60 inches or nearly four times the normal rainfall. At Cook, in the far west, evaporation is eighteen times the average rainfall. Metropolitan water storage losses due to evaporation in 1943–44 were calculated to be 1,239 million gallons in comparison with a metropolitan consumption of 8,841 million gallons.

(ii) *Administration.* Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department which administers the Waterworks Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to "divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under or on any land entered upon for the purpose of supplying water to the inhabitants of any water district".

(iii) *General.* Early steps were taken to vest all running streams, springs and "soaks" in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and "rainsheds" have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,185,841. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.

(iv) *Irrigation.* In South Australia irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey Brothers (*see* page 1097) in 1887 whereby 250,000 acres at Renmark were made available for irrigation settlement. The Department of Lands administers an area of 27,663 acres of high irrigable land, together with 9,365 acres of reclaimed swamp and 162,545 acres of non-irrigable land in the irrigation areas. In addition the Renmark Irrigation Trust controls 20,557 acres, of which 8,340 are irrigated. Water used for irrigation in 1946 in the area controlled by the Department of Lands was 115,328 acre feet compared with 88,638 in 1926. In the Renmark area water used for irrigation in 1946–47 was 25,780 acre feet. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lexias, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes, and citrus fruits. Before irrigation, these semi-arid lands were of little productive value. The following table shows the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and the government-controlled Reclaimed Swamp Districts near the mouth of the Murray :—

IRRIGATED AREAS : SOUTH AUSTRALIA, 1946–47.

ORCHARD LAND.

Name of Area.	Vine Fruits.	Tree Fruits.	Citrus Fruits.	Lucerne.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.
Berri	5,603	539	902	45	7,089
Cadell	645	90	70	60	865
Waikerie	2,015	326	890	61	3,292
Cobdogla	3,820	99	151	33	4,103
Moorook	403	74	126	15	618
Kingston	297	72	163	1	533
Chaffey	770	24	7	..	801
Mypolonga	36	323	409	..	768
Renmark	7,195	600	545	..	8,340
Total	20,784	2,147	3,263	215	26,409

RECLAIMED SWAMP LAND.

Name of Area.	Lucerne.	Other Fodders.	Total.
	Acres.	Acres.	Acres.
Monteith	..	917	917
Mypolonga	100	1,140	1,240
Wall	16	470	486
Burdett	2	90	92
Mobilong	49	403	452
Long Flat	..	240	240
Neeta	14	420	434
Pompoota	9	345	354
Cowirra	30	518	548
Jervois	94	3,391	3,485
Total	314	7,934	8,248

Total population of the upper Murray Irrigation Areas in South Australia is approximately 17,000 and 1,500 persons are settled on the reclaimed areas. The latter figure does not include the population of adjacent towns outside the area, but closely associated therewith.

The expenditure incurred by the Government in purchase of land, reclamation of swamps, preparation of irrigable lands for fruit growing, and purchase of pumping plants for drainage and water supply is approximately £4,250,000. A new irrigation development has been commenced at Loxton on the Murray, 180 miles from Adelaide, where it is anticipated that about 7,000 acres will be developed for planting of trees and vines for War Service Land Settlement. Water will be pumped from the Murray into open concrete channels and thence reticulated on to the blocks through pipelines. This land has previously been used for cereals and grazing.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 80 miles of channel for the reticulation of 8,250 acres.

(v) *Underground Water.* The occupied portion of South Australia is, on the whole, well endowed with underground water. The extent of the several artesian basins is tolerably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put. Apart from numerous boreholes and wells tapping underground water for farms, stations and towns, two notable basins are being developed on Eyre Peninsula—one at Flinders (Streaky Bay) and the other at Uley-Wanilla, near Port Lincoln. Leigh Creek coalfield, some 350 miles north of Adelaide, derives its supply from a borehole at Sliding Rock mine, the water being pumped through a pipeline 25 miles long.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government, however, to provide watering places along stock routes, and pastoralists rely largely on supplies in suspended basins at shallower depths.

There has been no regular measurement of flows from artesian bores, as in New South Wales and Queensland, but evidence of diminution exists. While the main intake areas for the Great Artesian and Murray Basins lie outside South Australia, there are considerable accessions within the State, and chemical contents of water of western origin are known to differ from those in the east. In South Australia absorption takes place in the channels of intermittent streams in times of flood, such streams being the Finke, Stevenson, Hamilton, Alberga and Arckaringa.

The minor intake areas of the Murray Basin are of the same character. The use of the waters of this basin is essential to settlement in the south-east, especially for farms, but also for township supplies for Mount Gambier, Naracoorte, Bordertown and Pinnaroo. In 1946–47 the ground water overlying the artesian water of the Murray Basin had been tapped by 121 boreholes drilled for new and prospective settlers. The maximum depth of these holes is 235 feet and the minimum 71 feet. Average tested yield is 14,808 gallons per day.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 15 drills. A large area within the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne and an examination of a large part of Kangaroo Island is being made to facilitate settlement.

The results of comprehensive surveys of underground supplies undertaken by geologists of the South Australian Government have been published in the State's geological survey bulletins in recent years.

(vi) *Farm Water Schemes.* While the Department of Mines and the Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs or the Murray River.

(vii) *Country Water Supply Schemes.* Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges. The principal towns served are Gawler, Angaston, Nuriootpa, Kapunda, Eudunda, Freeling, Hamley Bridge, Riverton and Saddleworth.

Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system, the principal towns served being Port Pirie, Crystal Brook, Gladstone, Balaklava, Snowtown, Wallaroo, Moonta and Kadina.

The Morgan–Whyalla pipe line now provides an assured supply for the industrial town of Whyalla, also for Port Augusta, and generally augments the supplies to the northern areas.

Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District. Tod River is the most important source of supply and water is pumped from this reservoir through 2½ miles of rising main to a service reservoir, the pumping lift being approximately 500 feet. From this service reservoir it gravitates for a distance of 240 miles in a northerly direction to Ceduna and the Port of Thevenard. Water from Tod River Reservoir is also used to supply Port Lincoln by gravitation, this town being 17 miles to the south. The principal towns served are Port Lincoln and Ceduna (Tod River system) and Cowell (Yeldulknie system). The demands of Eyre Peninsula have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley–Wanilla Basin is being developed. Boreholes are being sunk on this basin at selected points, pumping units installed and new mains and service reservoirs constructed. In addition to providing more water for the Tod River and Yeldulknie systems many miles of new mains are to be laid to serve areas hitherto without a distributed water supply.

Many other water supply schemes have been constructed in various parts of the State. These include pumping from the River Murray; supplies from sub-surface sources at Streaky Bay (Eyre Peninsula), Bordertown and Naracoorte and at other localities, including the recently established Leigh Creek coalfield; reservoirs to supply Victor Harbor, Strathalbyn and other southern districts; and a supply to Mount Gambier from the Blue Lake. More than 4,000,000 acres of country lands are provided with a reticulated supply.

(viii) *Morgan-Whyalla Pipeline.* The installation of a blast furnace at Whyalla and the extension of smelting activities of the Broken Hill Pty. Co. Ltd., combined with fears that existing supplies would be insufficient to prevent disaster to the agriculturalists of the north, led to the commencement of the pipeline in 1940. The work was completed in 1944 at a cost of £2,750,000 just in time to avert the threatened calamity. The total length of the pipeline, which brings water from the Murray at Morgan, is 223 miles. Water is pumped through 57 miles of 30 inch steel main to a summit storage at Hanson, 1,558 feet higher than Morgan; then gravitated through 166 miles of 26 inch to 21 inch pipe to Whyalla on the western shores of Spencer Gulf. Pipeline capacity is 2,150 million gallons per annum which can be boosted to 2,400 million. A power line from Adelaide, 119 miles distant, supplies the electricity for pumping. Under an agreement between the South Australian Government and the Commonwealth, an amount not exceeding 3,000,000 gallons in any week or 150 million gallons per year is to be made available at Port Augusta, this now being mainly required for railway purposes, including dwellings, workshops and locomotives. An agreement with the Broken Hill Pty. Co. Ltd. provides for a supply of not more than 3,000,000 gallons of water at Whyalla in any given period of 24 hours, for which the company pays a minimum of £40,000 a year irrespective of the amount used up to 343 million gallons. Above that figure payments are based on actual consumption.

(ix) *South-Eastern Drainage.* Nature has played an ironic prank in the south-east of South Australia where it has been necessary to construct costly drainage schemes to dispose of surplus water. The area comprises a series of valleys or flats separated by low ranges parallel to the coastline which prevent natural drainage. The highest "range" is approximately 50 feet above the adjacent flat and the most easterly flat, some 50 miles from the coast, is 200 feet above sea-level. The ranges are generally of poor soil or stony but the flats are fertile.

The Millicent Drainage System was completed in 1885, when 100,000 acres were reclaimed by 100 miles of drains at a cost of £150,000, which was included in the land allotment prices.

The South Eastern Drainage Area System, which is controlled by the South Eastern Drainage Board, comprises drains constructed by the Government at national cost, plus those undertaken by the Government in co-operation with the landholders. There are approximately 500 miles of drains, costing £720,000, of which the landholders are required to contribute £125,000. A scheme for the complete drainage and settlement of 400,000 acres in the western sector is under consideration.

(x) *Summary.* Water conservation and distribution works in South Australia have cost £20,000,000 (exclusive of river control and irrigation works on the River Murray which are dealt with elsewhere). A summary of statistical information concerning country supplies in 1946–47 follows :—Length of water mains, 5,400 miles ; approximate population served, 220,000 ; area served, approximately 4,000,000 acres ; and total capital cost, £13,688,324.

5. **Western Australia.**—(i) *Rainfall.* More than half Western Australia's area of 975,920 square miles receives an annual average rainfall of less than 10 inches and 87.2 per cent. receives less than 20 inches. Only 5.4 per cent. has an annual average above 30 inches, the bulk of which is associated with the low coastal ranges of the south-west. There are few rivers which run all the year, and underground supplies are generally regarded as poor, except in the artesian basins. Evaporation is high and records show that in the wheat belt (with an average annual rainfall of 10 to 20 inches) the average dam will lose annually between six and seven feet depth of water by evaporation. High evaporation rates, therefore, make special safeguards necessary, as for example, at Wicherina reservoir (105,000,000 gallons capacity) near Geraldton, where the storage has been roofed over an area of seventeen acres to prevent the loss of 40 million gallons annually. Eighty per cent. of the State's rainfall comes in five months, even in areas of adequate rainfall. Main irrigation areas in the south-west have an annual average of 40 inches. The bulk falls in May to September (inclusive). In December to March (inclusive) the annual average over a period of years has been half an inch per month.

(ii) *Administration.* Irrigation districts are administered under the Rights in Water and Irrigation Act of 1914–45 and the Government is advised by an Irrigation Commission representing the local irrigationists and government technical and financial branches. The Goldfields Water Supply is administered by a branch of the Public Works Water Supply Department and its responsibilities include control of water from this scheme for agricultural purposes. The metropolitan water supply is controlled by a separate department under the control of the Minister for Water Supply, Sewerage and Drainage. Under the Water Boards Act (1904) seventeen towns are administered by local water boards and nineteen are under direct Ministerial control. The Minister also controls three District Farming Schemes. Water rights over water flowing in streams and water courses is vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

(iii) *Irrigation.* The main irrigation areas are along the south-west railway line between Waroona (70 miles from Perth) and Dardanup (116 miles from Perth). The total area irrigated in 1946–47 was 17,947 acres and the total water allocated was 54,956 acre feet. In 1946–47 the total acre waterings (i.e. the number of acres watered multiplied by the average number of waterings) was 71,104 and the number of holdings 438.

In 1917 a concrete gravity dam with a capacity of 1,840 acre feet was built on the Harvey River to irrigate a district of 2,928 acres designed mainly for citrus culture. As the orchards proved a failure, the water was devoted to pastures and the demand soon exceeded supply. Accordingly, the reservoir was enlarged to 8,300 acre feet and Harvey District No. 2 was established. At the same time the Waroona District of 10,325 acres was constituted, and served from the Drakesbrook reservoir (1,855 acre feet). The Collie River District (28,762 acres) was also established, served by a reservoir of 27,800 acre feet.

To meet the demand for more frequent waterings, a dam has been constructed at Samson's Brook (6,540 acre feet) and the Stirling Dam was completed in 1947 with a capacity of 44,344 acre feet. The latter is the second largest storage in Western Australia and is regarded as the highest earth dam in Australia, the total height of the wall being 148 feet above stream level.

The following table, which shows acre waterings supplied to crops during each season 1935–36 to 1946–47, illustrates the growth of these irrigation schemes.

IRRIGATION, WESTERN AUSTRALIA: ACRE WATERINGS.

Year.	Pasture.	Fodder.	Potatoes.	Vegetables.	Orchard.	Flax and Broom Millet, etc.	All Crops.
1935–36	18,049	2,177	2,339	613	891	..	24,069
1936–37	24,067	1,528	3,305	986	1,025	2	30,913
1937–38	25,606	1,575	2,394	904	1,102	..	31,581
1938–39	31,049	934	3,142	692	922	..	36,739
1939–40	35,774	747	5,330	980	928	..	43,759
1940–41	30,731	839	3,352	444	940	18	36,324
1941–42	40,625	961	2,811	1,259	879	8	46,543
1942–43	35,552	931	2,565	1,687	789	..	41,524
1943–44	53,389	434	2,787	2,389	1,134	40	60,170
1944–45	50,748	453	5,363	2,543	1,107	66	60,280
1945–46	57,707	995	4,269	2,915	1,176	209	67,271
1946–47	61,948	547	4,304	3,209	1,096	..	71,104

(iv) *Goldfields Scheme.* Western Australia has one of Australia's most spectacular water supply schemes. A substantial population gathered in the Kalgoorlie-Coolgardie goldfields after the discovery of gold in 1892. As the area is 400 miles from the coast and has an annual rainfall ranging from 4 to 9 inches, the Government spent £400,000 in providing water by boring, well-sinking and distillation. The goldfields were not connected with the coast by rail at that time and many difficulties arose in bringing water from a distance. Consequently a scheme propounded by the Engineer-in-Chief (Mr. C. Y. O'Connor) was adopted to provide a storage at Mundaring on the Helena River, 26 miles from Perth, from which water could be pumped through a pipeline to the goldfields. The job was commenced in 1898 and completed in 1903. Mundaring reservoir has a capacity of 4,650 million gallons and a catchment of 569 square miles. The water now passes through 430 miles of steel main, mostly of 30 inch diameter, aided by eight pumping stations, involving a total net lift of 1,280 feet.

Hundreds of miles of branch mains and pipes have been laid to mining districts, towns and farming districts, the most important being the Norseman extension of 101 miles. The system serves 34 towns and water is reticulated to 970,000 acres of farming lands. Total length of mains is 1,757 miles and the population served is 50,000. Total quantity of water pumped from Mundaring in 1946-47 was 2,225 million gallons. Total cost of system to the end of 1946–47 was £6,281,291.

(v) *Rock Catchments.* An interesting feature of the State's conservation system is found in the Barbalin, Narembeen and Kondinin District Farming Land Schemes in the wheat belt, where extensive granite outcrops have been used as catchments. The rain is caught at the foot of the rocks, and pumped to tanks from which the water is reticulated to farms. The Barbalin system comprises Barbalin Reservoir (41,000,000 gallons); Waddouring Reservoir (21,750,000 gallons) and Knungagin (7,750,000 gallons), the catchment areas being 272 acres, 160 acres and 87 acres respectively. Over 300 farms are supplied comprising 340,000 acres. Total mileage of pipes is 329, and these serve a number of small towns also. This scheme is now connected with the Goldfields pipeline to supplement supply in dry times. The Narembeen reservoir has a capacity of 9,500,000 gallons based on a catchment of 119 acres. It serves 86 farms totalling 88,000 acres. The Kondinin reservoir has a capacity of 9,500,000 gallons based on a catchment of 70 acres. The scheme supplies 38 farms totalling 40,000 acres.

(vi) *South-west Scheme.* The Commonwealth Government has agreed to assist a scheme to extend water for agricultural areas and towns in the south-west of Western Australia, which will be administered by the State Government. It is estimated that the scheme will cost £4,300,000 of which the Commonwealth will contribute £2,150,000. The scheme provides for raising the height of the Mundaring Weir and the Wellington Dam and increasing the capacity of pumping stations on the Goldfields pipeline to permit water diversions from that source. Twenty-three towns and over 4,000,000 acres of agricultural country will benefit.

(vii) *Underground Water.* Individual farmers, orchardists, market gardeners and others derive water from wells or windmills wherever available, and, where power is available, pumps and motors are used to tap such supplies. The Department of Public Works has twelve boring plants which are lent out to farmers to facilitate boring operations to an average depth of 150 feet. The Department also contracts with private firms to bore for communal farm supplies. Records are kept of all bores sunk (including exploratory bores) together with details concerning the strata encountered, and the quality and quantity of water obtained. These are made available to anyone who wishes to bore on his own account in the same locality.

During the past 53 years 296 artesian and sub-artesian bores have been sunk, mostly for private purposes. No bores may be sunk without a government licence. The most complete operation records exist in relation to bores in and around Perth which augment metropolitan supplies in the summer months. When these bores are brought into service at the beginning of each season (usually about the end of October), the pressures are sufficient to maintain the flow, but by February the pressures have to be boosted to maintain flow. The bores are usually closed down by the end of March, and from then the pressures gradually rise to the normal static maximum as no draw takes place for six to seven months, confirming the conclusions of the Queensland Artesian Investigation Committee.

The total depth of all recorded bores in Western Australia is 242,333 feet; daily flow is 80,418,500 gallons; and the average depth at which water is struck is 819 feet. Maximum depth of any bore is 3,325 feet and minimum 39 feet.

(viii) *Ord River Scheme.* The Ord River in the north-west of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 in the north. The hottest months (December to March) are also months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam to conserve 2,000,000 acre feet of water, equipped with hydro-electric plant, which might supply irrigation water for an area of 100,000 acres if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. However, the economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

6. **Tasmania.**—(i) *Rainfall.* The area of Tasmania is 26,215 square miles. Mainly mountainous and in the temperate latitudes, the State has a high and comparatively regular rainfall. Of the total area, 56.5 per cent. receives an annual average exceeding 40 inches; 76.9 per cent. receives more than 30 inches; 11.4 per cent. receives between 25 and 30 inches; and 11.0 per cent. between 20 and 25 inches. Maximum rainfall in the Lake Margaret district has been known to exceed 175 inches (in 1924), and many mountainous areas receive over 100 inches.

(ii) *General.* Owing to its fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for domestic and industrial purposes is more important than irrigation.

(iii) *Administration.* The State does not own all natural waters as in Victoria, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. There is no machinery other than the Courts for deciding the issue in cases where municipal councils or private individuals propose to divert water for town supplies or irrigation from streams in which neither of these two authorities is interested. The only exceptions are a few municipal and industrial undertakings which have statutory rights, such as the Hobart Corporation, two paper manufacturers, and a company producing paint ingredients.

(iv) *Irrigation.* There are no State irrigation projects and none are envisaged in the near future. All systems operating are privately owned and, with one exception (at Bushy Park), are single farm units. At Bushy Park a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder concerns areas devoted to vegetables and served by municipal water supplies. Irrigation, as practised in Tasmania, was applied in 1946–47 to 9,326 acres devoted to: hops (1,153 acres); fruit (1,207 acres); pastures (6,191 acres); cereals, hay, etc. (240 acres) and other crops (535 acres).

(v) *Underground Water.* There is only one known flowing bore—at Speyrton, which yields 1,690 gallons per hour. Underground water is of poor quality and a small quantity exists over an area in the Midlands which has been exploited to a limited extent only by bores and windmills. Geological conditions do not appear to favor the utilization of ground water except on a minor scale.

(vi) *Farm Supply Schemes.* Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare.

(vii) *Industrial.* Three principal industrial schemes have been installed privately. The Australian Newsprint Mills pump approximately 6,000,000 gallons a day from the Derwent River at Lawaitta for the Boyer mills where it is coagulated and filtered. Associated Paper Mills pump several million gallons a day from Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Weybridge. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State, at present largely unsettled. Diversion to the eastern side of the watersheds is regarded as practicable.

(viii) *Hydro-Electricity.* (*a*) *General.* Tasmania's hydro-electric potential has been estimated at 3,500,000 h.p., making the State the major contributor to the Australian total. Installed capacity at the end of 1947 was 184,000 k.w. or approximately two-thirds of the Australian total of 205,400 k.w.

Tasmania depends entirely on water for power development, and its rich mineral and timber resources have contributed substantially to such development. When the Launceston City Council commenced the construction of a 75 h.p. station at Duck Reach on the Esk River in 1895, Tasmania pioneered the generation of water power for Australia. The undertaking was taken over by the Hydro-Electric Commission in 1944, when its capacity had been increased to 3,500 h.p.

The Commission now provides most of Tasmania's power requirements from three schemes—the Waddamana, Tarraleah and Shannon. The Mount Lyell Mining and Railway Co. Ltd. also operates a 10,000 k.w. plant at Lake Margaret to serve copper mines, and this station is interconnected with the Commission's network. Small stations operated by tin mining companies have a total capacity of 2,000 k.w.

(*b*) *Waddamana.* This scheme was completed in 1916 with an original capacity of 10,000 h.p., since increased to 66,000 h.p. Waddamana B was completed in 1944 with a capacity of 33,400 h.p. and since that date the total has been increased to 50,000 h.p. A further 16,700 h.p. plant is being installed. When this is installed, the total capacity of Waddamana will be 132,700 h.p. The scheme was commenced by the Hydro-electric Power and Metallurgical Co., formed to generate power from the Great Lake to treat complex ores by an electrolytic method, but was taken over by the Government when the company faced financial difficulties.

(*c*) *Shannon.* To meet the terms of a contract with the Electrolytic Zinc Co. of Australasia Ltd. in 1919, the Government decided to enlarge the Great Lake scheme by the construction of a dam at the outlet of the lake, 3,380 feet above sea level, to conserve the water on a catchment of 150 square miles, with a rainfall ranging up to 60 inches. The dam is situated at the source of the River Shannon. A canal, five miles long, to divert water from the River Ouse to the Great Lake, was completed in 1923 and the catchment increased by the addition of the run-off from 100 square miles of rugged country to the westward with a rainfall up to 80 inches. This canal was partially relined with concrete in 1943. Water from the Great Lake, representing a flow of 610 cusecs or 350 million gallons a day, passes down the Shannon River to the Shannon Power Station by pipeline and canal, where 14,500 h.p. is generated before the water passes into the Waddamana canal and power station. A second canal is under construction to provide water for operation of the additional plant being installed at Waddamana. Transmission lines connect the stations with Burnie, Launceston and Hobart.

(*d*) *Tarraleah.* This development is situated on the Nive River, and served by water from the River Derwent at Lake St. Clair and Clark Dam. The dam will ultimately have a hydro-electric installation. The system was completed in 1938 and now has a total capacity of 105,000 h.p. The water from Lake St. Clair flows down the Derwent to Butler's Gorge, where a 200 feet concrete dam will impound 243,000 acre feet of water. At the foot of the dam a power station is being built to produce an average of 12,000 h.p.

(*e*) *Lake Margaret.* On Mount Sedgwick, on the west coast, 2,168 feet above sea level, is the site of two stations with a combined capacity of 12,000 h.p. They are operated by the Mount Lyell Mining and Railway Co. Ltd. whose copper smelting works are 5 miles distant. The average rainfall on the catchment is 147 inches.

(*f*) *Future Programme.* The Hydro-Electric Commission is carrying out investigations to develop an additional 100,000 h.p. to meet increasing demands. Coupled with this is a long range development programme concerned with the provision of 500,000 h.p. in the next twenty years. The authorities consider the most economical development will be in the high catchment areas of the Derwent, Nive and Ouse Rivers. Within the next three years the Clark Dam will be completed to provide an additional 34,000 h.p. at an estimated cost of £2,000,000.

(*g*) *Summary*. The following table represents the development of Tasmania's hydro-electric power resources at the end of 1947 :—

HYDRO-ELECTRIC POWER RESOURCES : TASMANIA, 1947.

Name.	Installed Capacity.	Ultimate Capacity.	Average Flow per Year.
	K.W.	K.W.	Acre Feet.
Waddamana	85,000	97,000	430,000
Shannon	10,500	10,500	400,000
Tarraleah	75,000	90,000	634,000
Clark Dam	Nil	12,000	634,000
Launceston	2,000	2,000	211,000
Lake Margaret	10,000	10,000	56,000

7. **Northern Territory.**—(i) *Rainfall*. The Northern Territory (523,620 square miles) is located in the North-West Monsoon–South-East Trade Wind Belt and consequently has a pronounced summer incidence of rainfall. In northern sections approximately 85 per cent. of the annual precipitation occurs during the four months, December to March. It is not unusual for up to six of the coldest months to be quite rainless. In the south the seasonal variation is less marked and during winter months southern depressions not infrequently bring beneficial rains. Rainfall varies from 60 inches at Darwin to below 5 inches in the south-east corner. Over the total area, 26.6 per cent. receives an average annual rainfall of over 25 inches per annum ; 16.3 per cent. receives between 15 and 25 inches ; 57.1 per cent. receives below 15 inches.

The north to south variation in mean yearly temperature is not very pronounced, ranging from 85 degrees at Darwin to a little over 70 at Alice Springs. Moreover, this difference is largely accounted for by the difference in topography, Alice Springs being some 2,000 feet above sea level. Seasonal and diurnal variations are much more marked, being much greater in the south than the north. While Alice Springs experiences fairly severe frosts in the winter months, summer temperatures of up to 115 and even 120 degrees may occur in the desert to the south-east of the Territory. Darwin, on the other hand, is frost free and rarely registers temperatures over 100 degrees. In a large part of the Territory evaporation rates are high.

(ii) *Rivers*. The main topographical features are the Arnhem Land Plateau in the north-east, the Barkly Tableland in the east, and the MacDonnell Ranges rising out of a central peneplain in the south. About half the territory south of the 15 inch isohyet drains internally. In southern parts the rivers are really storm channels, and when they flow their waters are lost in the near-desert soils. In the north the coastal rivers flow continuously throughout the year, though their flow is markedly seasonal.

(iii) *Irrigation*. There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (80,350 acre feet) which serves Darwin with a reticulated supply. Irrigation has therefore assumed no current importance. Small agricultural activity exists in the higher rainfall areas near the coast, the rainfall being supplemented by small-scale irrigation only. Peanuts are grown under natural rainfall conditions north of Katherine. Market gardens and citrus orchards exist on a more intensive scale near Alice Springs, being dependent on small-scale irrigation practices.

The Katherine River appears to offer large-scale irrigation potentialities on the levee soils below the township. The river passes through a gorge some miles upstream under conditions apparently suitable for dam construction. No geological or drilling investigations have yet been made, but the Commonwealth Scientific and Industrial Research Organization is investigating the potentialities of the soil for agricultural production.

(iv) *Underground Water*. Artesian water is found mainly in the south-east where the Great Artesian Basin enters the Territory. Pastoral (beef) production accounts for over 90 per cent. of the Territory's income, and the marked seasonal conditions affect the industry's economy. During the wet summer season there is adequate water, but during the winter most natural watering points disappear, and pastures dry. Bores supplement the permanent watering points which are mainly along river frontages. The cattle industry is concentrated in the area in which the feed retains an appreciable nutritive value during the winter despite the dry conditions. This area is not in the wetter coastal regions, but in the inland belt of 15 to 25 inch rainfall and to the north of Alice Springs. Lack of bores is a limiting factor in the industry's economy, as cattle are able to thrive only within certain distances of reliable water.

In 1947 some 602 bores were recorded, comprising 339 put down by pastoralists, 106 established by the Government on stock routes, 12 leased by the Government to pastoralists, 2 maintained by the Postmaster-General's Department, and 143 put down north of Birdum by the military services during the war.

Complete records are not available concerning these bores. Stock route bores range in depth from 37 to 640 feet, and the total hourly capacity of the 106 bores concerned is approximately 136,615 gallons per hour. Statistics for the 143 service bores put down during the war show that depths range from 40 to 374 feet, and that total hourly capacity approximates 150,530 gallons per hour.

(v) *Control.* Under the Control of Waters Ordinance (1938) of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed.

8. **Papua and New Guinea.**—(i) *Rainfall.* When all localities (32 stations) where gauges are kept are taken into consideration, the average annual rainfall, over periods varying from two to ten years, is about 159.21 inches. This figure includes both inland and coastal stations. Mean annual rainfall for the inland stations, which average 786 feet in height, is 134.77 inches and for coastal stations, 83.66 inches.

(ii) *General.* For a general description of these territories see Chapter X.—" The Territories of Australia ", pages 345, 346 and 353 of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development. The main water conservation interest in New Guinea at present is the hydro-electric potential.

Those portions of New Guinea administered by Australia are well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to 13,000 feet. Complete data concerning water resources are not available, but it is known that the opportunities for production of hydro-electric power are extensive. Some authorities estimate that 20,000,000 h.p. could be generated. Present investigations have been limited to those areas where a demand for power is likely to arise. New Guinea has a substantial native population and few major industries.

Explorations over the southern portion, known as Papua, have resulted in the collection of much information concerning water resources. The largest stream is the Fly River, at least 500 miles long, which is situated in the western division. Its large tributaries extend to the northern boundary of the Territory rising among lofty mountain ranges. Records show that at a point above the tidal influence, where the river is 600 yards wide and 40 feet deep, the stream travels at a rate of 3½ miles per hour and discharges 105,200,000 gallons per minute.

All the principal rivers flow from the main range in a southerly direction. Most of them carry a large volume from a great height over relatively short distances. They have a total catchment of about 50,000 square miles having an elevation between 2,000 and 13,000 feet.

(iii) *Hydro-Electricity.* The Government Geologist has estimated that if only 50 per cent. of the annual rainfall were utilized through a height of only 500 feet a total of 8,500,000 h.p. would be produced.

The Bulolo River, which delivers 400 to 500 cusecs at a point 2,600 feet above sea level, is being harnessed by a gold mining company for 20,000 h.p., but total power produced in New Guinea in 1945–46 was 10,000 h.p.

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CHAPTER XXVI.

DEFENCE.

§ 1. Department of Defence.

1. **Introduction.**—At the outbreak of the 1939-45 War, the Department of Defence comprised the three Fighting Services. In November, 1939 separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet and the Advisory War Council.

2. **Post-war Functions and Organization.**—(i) *The Cabinet and the Council of Defence.* The determination of defence policy is the responsibility of Cabinet. It is assisted in this by the Council of Defence, which is a statutory body created under Section 28 of the Defence Act, its functions being to consider and advise upon any questions of defence policy or organization which are referred to it by the Prime Minister or the Minister for Defence. The Council consists of the Prime Minister and those Ministers most concerned in defence, the three Chiefs of Staff and the Secretary, Department of Defence.

(ii) *Functions of Department of Defence.* Subject to the authority of Cabinet and the Council of Defence, the Minister and Department of Defence are responsible for :—

(1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including :—(*a*) co-operation in British Commonwealth defence and the defence aspect of the Charter of the United Nations ; (*b*) the supply aspect of defence policy, including the review of production programmes and capacity ; (*c*) the scientific aspect of defence policy ; and (*d*) the financial requirements of defence policy, and the allocation of funds made available.

(2) The defence aspect of Armistice and Peace Terms, Control Commissions, and Forces of Occupation.

(3) Matters of policy or principle and important questions having a joint service or inter-departmental defence aspect.

(4) The higher defence machinery, the control of the joint service machinery, and the Secretariat of the Council of Defence.

(5) The defence aspect of questions relating to the organization and machinery for :—(*a*) co-operation in British Commonwealth defence ; (*b*) co-operation in regional security, including obligations under the United Nations Charter ; (*c*) higher direction in war ; and (*d*) higher direction of the Services.

(6) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.

(7) The administration of inter-service organizations, such as the joint intelligence machinery.

(8) The defence aspect of :—the strength and organization of the Forces, higher appointments in the Services, Honours and Awards, and civil defence policy.

(iii) *Joint Service and Inter-Departmental Machinery.* The joint service and inter-departmental advisory machinery of the Department consists of various committees headed by the Defence Committee and the Chiefs of Staff Committee. The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, and the Chiefs of Staff of the three Services. In general, its function is to advise on defence policy as a whole, and on matters of policy or principle and important questions having a joint service or inter-departmental defence aspect. The main responsibility of the Chiefs of Staff Committee is the preparation of strategic appreciations and military plans. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the principal Administrative Officers Committee (Maintenance and Materials), the Principal Administrative Officers Committee (Personnel), the New Weapons and Equipment Development Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

The Defence Scientific Advisory Committee is responsible for furnishing advice on the scientific aspect of defence policy.

3. **Post-war Defence Policy.**—(i) *Basis of Australia's Post-war Defence Policy.* The basis of Australia's post-war defence policy is stated in the following terms in the Government's announcement of 4th June, 1947:—

> " The Forces to be placed at the disposal of the United Nations for the maintenance of international peace and security, including regional arrangements in the Pacific ;
>
> The Forces to be maintained under arrangements for co-operation in British Commonwealth Defence ; and
>
> The Forces to be maintained to provide for the inherent right of individual self-defence ".

(ii) *Post-war Defence Programme.* The approved post-war defence programme, extending over a period of five years from 1947–48 to 1951–52, will cost £250,000,000 or an annual average vote of £50,000,000. The post-war defence programme is designed to secure a balanced scheme of defence providing for the Navy, Army and Air Force, Defence Research and Development, and Munitions and Supply, in proper proportions within the limits of the available resources that can be devoted to defence. The roles of the three Services are blended and inter-related and their strength and organization have been determined on the basis of the fulfilment of the objectives of policy stated above.

(iii) *Defence Research and Development.* The whole question of post-war policy is affected by the impact of scientific development on the types of weapons and armament for the various Services, and the results of these developments will be under constant notice. High priority is therefore given in the programme to defence research and development, for which an amount of £33,500,000 is being provided under the five year programme. The main individual item is the Long Range Weapons Project which is a joint United Kingdom-Australian undertaking. It is the first important step in the widening of Australia's responsibility in defence research and development in accordance with the policy of the strategic development and distribution of the resources of the British Commonwealth. The Department of Defence is responsible for questions of policy in this field, and the Department of Supply and Development is the responsible authority for executive action in respect of approved policy decisions.

(iv) *National Planning for an Emergency.* To achieve a balanced defence policy, it is necessary to ensure proper co-ordination of the Navy, Army and Air Forces, the supply organization and the civil economy which supports the direct military effort. The Government's policy provides for the co-ordination of these as integral parts of the national defence policy. The basis of planning for these matters and also for the civil defence measures necessary to protect the community against attack by modern weapons is the Commonwealth War Book and Departmental War Books. These are now being revised in the light of wartime policy and likely contingencies.

(v) *Flexibility of Post-war Policy.* It is important that the future developments in weapons and methods of war should be borne in mind when considering national defence, the shape and size of post-war forces, and the new problems of organization and training which they will create.

Australian policy, like that of the United Kingdom, will be kept flexible. At the same time, while the completion of the objectives laid down will be vigorously pursued according to the planned schedule of the programme, a continuous review will be maintained in regard to progress and the need for any variations that may arise.

4. **Co-operation in British Commonwealth Defence.**—The defence programme gives practical and substantial effect to the acceptance by Australia of a larger contribution towards the defence of the British Commonwealth in the Pacific, and the relief in corresponding degree of the burden for so long carried by the United Kingdom. The need for improved machinery for co-operation in British Commonwealth defence has been recognized and advocated by the Australian Government for some time, and proposals by it to achieve this objective, with particular application to the Pacific Area, have now been agreed to by the Governments of the United Kingdom and New Zealand.

5. **Australian Participation in the Occupation of Japan.**—By agreement between the Australian Government (acting on behalf of the Governments of the United Kingdom, Australia, New Zealand and India) and the United States Government, arrangements were confirmed in January, 1946 for a British Commonwealth Force under an Australian Commander to participate in the occupation of Japan. For the control and administration of this British Commonwealth Occupation Force (BCOF), the Australian Defence Committee was augmented by the inclusion of representatives of the other Governments concerned, and the Chiefs of Staff Committee was extended similarly to form the Joint Chiefs of Staff in Australia (JCOSA).

In February, 1946 the bulk of the contingents from the participating countries assembled in Japan under the command of Lieutenant-General J. Northcott, Australian Military Forces. The force consisted of a small Royal Naval Port Party, an army component consisting of brigades from each of the United Kingdom, India, New Zealand and Australia, and an air component of a Royal Australian Air Force Wing of three squadrons of Mustangs, two Royal Air Force Spitfire Squadrons, one Royal Indian Air Force Spitfire Squadron and a Royal New Zealand Air Force Squadron of Corsairs. A large proportion of the personnel required for the controlling head-quarters' staffs and base organization was provided from Australia. Arrangements were also made for Australia to act as the main source of supply of BCOF. Of a total BCOF strength of some 36,000 in February, 1946, 9,155 were Australian Military Force personnel and 2,185 were Royal Australian Air Force personnel. Apart from this contribution to BCOF, the Royal Australian Navy provided a naval support unit of two ships for service with the British Pacific Fleet in Japanese waters.

BCOF is charged with representing worthily the British Commonwealth in the occupation of Japan, maintaining its prestige in the eyes of the Japanese, and illustrating to them the British Commonwealth democratic way and purpose in life. In addition, extensive patrolling and garrison duties have been undertaken as well as the destruction of thousands of tons of Japanese warlike material and the repatriation of a large number of Japanese servicemen.

During 1946 there was little change in the over-all strength of the Force, although it assumed responsibility, under the Supreme Commander Allied Powers, for the Prefectures of Shimane, Yamaguchi, Tottori, Okayama, and the island of Shikoku, in addition to the original BCOF area of the Hiroshima Prefecture. In June, 1946 command of BCOF passed to Lieutenant-General H. C. H. Robertson, Australian Military Forces. Early in 1947, due largely to man-power difficulties and to settled conditions in Japan, the total strength of the Force began to decline. Substantial reductions were effected in the United Kingdom and New Zealand Contingents and later in the year the Indian Contingent was completely withdrawn. At the close of 1947 the total strength of BCOF was less than 16,000, the Australian Military Forces and Royal Australian Air Force strengths being respectively 8,573 and 2,048 all ranks. With agreement of the participating Governments the JCOSA organization was discontinued on 31st December, 1947, and responsibility for the control and administration of BCOF was then assigned to the Australian Government.

The demilitarization of the BCOF area has been completed without incident, and BCOF has played an important part in the success achieved by the military occupation and administration of Japan.

§ 2. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. *See* also Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) was :—New South Wales, 9,338 ; Victoria, 6,335 ; Queensland, 4,028 ; South Australia, 2,932 ; Western Australia, 2,696 ; Tasmania, 2,024 ; total for Australia, 27,353. This total was exclusive of cadets, reservists and rifle club members.

2. **Commonwealth Systems.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in fifteen phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous army in 1902 up to the decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), *see* Official Year Book No. 36 and earlier issues.

The eighth phase was initiated by the Government on 2nd September, 1939, when the Governor-General issued a proclamation of the existence of war or of a danger thereof and for the calling out of the Citizen Forces for war service. The ninth phase was initiated on 13th October, 1939, when the organization of the Australian Military Forces into Commands came into operation. The objects of the Command Organization are as follows :—(*a*) to bring peace organization into line with war organization ; (*b*) to provide for the personal and whole-time guidance and supervision, by a higher commander, of divisional and other formation commanders, on questions of training and general preparedness for war ; and (*c*) to reduce the number of lower formations under the direct control of Army Head-quarters.

The tenth phase was initiated on 30th November, 1939, when a proclamation was issued under the Defence Act calling upon certain personnel to enlist and serve in the Defence Forces.

The eleventh phase : Owing to a considerable expansion in the administrative functions which the three main commands were called upon to perform, it was decided to relieve the G.Os.C. of these commands and their staffs of much of their administrative responsibilities in order that they might concentrate on operational matters. In January, 1942, therefore, Northern, Eastern and Southern Commands were divided into separate command and base head-quarters—the command head-quarters to handle operational, and base head-quarters administrative, matters.

The twelfth phase : As a result of the expansion in supply and other administrative installations in Australia, it was found necessary to revise the machinery for command administration of lines of communication areas and to decentralize control. A division into lines of communication areas was therefore made, and these areas corresponded with Northern, Eastern, Southern and Western Commands and 7th and 8th Military Districts. Command and general administrative control of the lines of communication areas were placed under the respective base head-quarters and 7th and 8th Military Districts and came directly under Army Head-quarters.

The thirteenth phase : In August, 1941 War Cabinet approved of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The G.O.C.-in-C. was made superior to the G.Os.C. Commands for the direction of operations, but subordinate to the Military Board, which remained the body advising the Minister for the Army, and through him, War Cabinet.

The fourteenth phase : Shortly after the outbreak of war with Japan, a number of units of the United States Forces were routed to Australia. Subsequently additional forces arrived. By agreement among the Governments of the United States, the United Kingdom, the Netherlands and Australia in April, 1942, General Douglas MacArthur was appointed Commander-in-Chief, South-west Pacific Area. General Sir Thomas Blamey was assigned to the command of the Allied Land Forces in the South-west Pacific Area by General Head-quarters, South-west Pacific Area. With the appointment of General Sir Thomas Blamey as Commander-in-Chief Australian Military Forces, the Military Board ceased to function and Army Head-quarters became Allied Land Forces

Head-quarters, Australia. As from 9th April, 1942, the system of commands and bases was abolished and replaced by the field army and lines of communication areas which were established in each of the six States on the mainland plus Northern Territory and New Guinea. Field formations were formed as follows :—

First Australian Army—from Northern and Eastern Commands.
Second Australian Army—from Southern Command.
Third Australian Corps—from Western Command.
Northern Territory Force—from 7th Military District.
New Guinea Force—from 8th Military District.

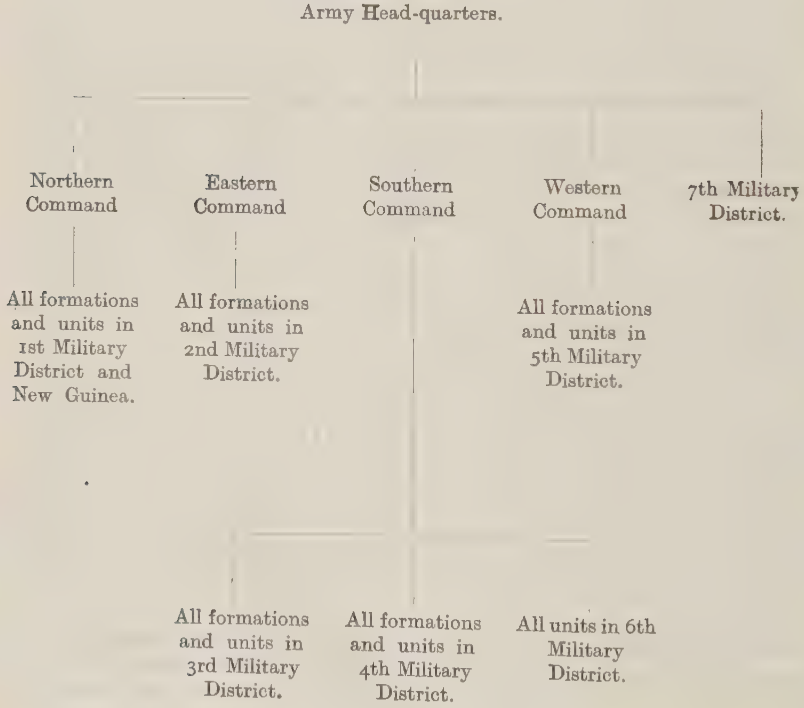
In March, 1943 First and Second Armies took over from Queensland, New South Wales and Victoria lines of communication areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944 Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

The fifteenth phase : In March, 1946 the Military Board and the organization of commands and military districts was re-introduced.

(ii) *Population of Military Age, Census*, 1947. The following particulars show the numbers of males of military age in the population of Australia as at the Census of 30th June, 1947. The total number of cadet age, 12 and over, and under 18, was 333,373 ; at citizen soldier age, 18 and over, and under 26, 495,867 ; and 26 and over, and under 35, 532,210 ; making a total of 1,028,077, 18 and over, and under 35, which is considered the best period for military service. In addition to the above-mentioned, there were 1,186,141 males 35 and over, and under 60, in Australia at the 1947 Census.

(iii) *Allotment of Units.* Under the Command Organization (*see* above) units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services.

COMMAND ORGANIZATION.


Army Head-quarters.
Northern Command
Eastern Command
Southern Command
Western Command
7th Military District.
All formations and units in 1st Military District and New Guinea.
All formations and units in 2nd Military District.
All formations and units in 5th Military District.
All formations and units in 3rd Military District.
All formations and units in 4th Military District.
All units in 6th Military District.

Military Districts conform generally to State or Territory areas, as follows :—1st Military District, Queensland ; 2nd, New South Wales ; 3rd, Victoria ; 4th, South Australia ; 5th, Western Australia ; 6th, Tasmania ; 7th, Northern Territory. Third Military District includes a considerable portion of Southern New South Wales, and 4th includes Broken Hill.

(iv) *Strength of Military Forces.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on 11th November, 1921, it was decided to continue the universal training law, but its operation was restricted to the more populous centres and to certain quotas only. From 1st July, 1922 to 30th June, 1925, training in the Senior Cadets was limited to two quotas instead of four, and in the Citizen Forces to two quotas instead of seven. On 1st July, 1925 Senior Cadet training was reduced to one quota only, while Citizen Force training was increased to three quotas. These conditions remained in force until 1st November, 1929, when the constitution of the forces on a voluntary basis was adopted. During the period last mentioned Senior Cadet training commenced on 1st July of the year in which Senior Cadets reached the age of 17 years, and on 1st July of the following year they were allotted to the Citizen Forces, in which training continued until 30th June of the year in which they attained the age of 21 years. Notwithstanding the reduction in training, all males residing within 5 miles of a training centre were required to register during the months of January or February of the year in which they reached the age of 14 years. Junior Cadet training of boys of the ages of 12 and 13 years, which was in abeyance during the years 1922–23 and 1923–24, was also supervised by the Defence Department during the period 1st July, 1925 to 31st October, 1929.

Under the voluntary enlistment system, personnel might enlist for a first period of three years, and on its completion the member concerned might be re-engaged for successive periods of two or three years until he reached the age for retirement.

The Commonwealth Government has approved a programme extending over a period of five years from 1947 to 1952. This programme provides for the raising of an Australian Regular Army of a total strength of 19,000 all ranks, and a Citizen Force of a total strength of 50,000 all ranks. Both the Regular and Citizen Forces are recruited by voluntary enlistment. The strength of the Australian Military Forces at the 31st December, 1947 was 24,792.

The Australian Cadet Corps is a voluntary organization comprised of Senior Cadet Detachments raised at educational establishments in all States of the Commonwealth. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The minimum age for enrolment in school detachments is 14 years, and cadets, who receive a free issue of A.M.F. pattern uniform, may remain therein until they cease to be pupils of respective educational establishments. Provision is made for the appointment of officers, warrant and non-commissioned officers on an authorized scale from within school detachments which, as a matter of general policy, are not affiliated with units of the Military Forces, but may be so affiliated in special cases. The establishment for the whole Corps is 25,000, and by December, 1947 the number of Senior Cadet Units had been increased to 226 with an aggregate strength of approximately 21,283.

(v) *The Australian Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established.

Early in the 1939-45 War this School was moved to Duntroon and in April, 1942 it was re-designated the Staff School (Australia). Later in this same year a senior wing was added to the original one. These two wings came under the general control and administration of the Commandant of the Royal Military College (*see* para. (vi) following), and the College was re-designated the Royal Military College and Staff School (Australia).

Officers were trained in this School for first and second grade staff appointments; students for second grade appointments were trained in the Junior Wing and students for first grade appointments were trained in the Senior Wing. A high standard of training was set from the inception of the School and it has since been continuously maintained. The symbols "SC" and "sc" were awarded to students who qualified at the Senior and Junior Wings respectively. The passing of these courses at the Staff School was laid down as an essential qualification for officers to be eligible for posting to staff appointments in field formations.

Concurrently with the commencement of the course at Duntroon, the First Australian Army Junior Staff School was established at Ashgrove in Queensland for the training of officers for third grade and unit staff appointments. This School was later absorbed into the Staff School (Australia) in 1944, when it was found necessary to centralize the training of staff officers throughout the Army.

Accordingly the two wings were moved from Duntroon to Cabarlah in Queensland, and together with the First Australian Army Junior Staff School's Wing became known again as the Staff School (Australia) which was organized into Grade 1, Grade 2 and Grade 3 wings, the functions of which were to train officers for 1st grade, 2nd grade and 3rd grade staff appointments respectively. An additional function of the Grade 3 wing was to provide training for unit staffs, i.e. adjutants and quartermasters.

The instruction at this School included the staff duties for all types of operations but it was restricted in each wing to the required scope and standard.

Early in 1946 the Staff School (Australia) was moved to Seymour in Victoria and it was re-designated the Australian Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff in Victoria, where it is at present situated.

The Grade 1 and Grade 3 courses were discontinued at the College in 1946. Grade 2 courses of six months' duration were introduced, which provided for the training of thirty selected students at each course. Since 1947 the courses have been of one year's duration and are held from February to December each year. In Australia students may also be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in organization, equipment, tactical doctrine and staff and command training throughout the Empire the closest liaison is maintained with other Empire Staff Colleges. Since the beginning of 1947 the Staff College courses throughout the Empire have been of one year's duration. The Australian Staff College is imperial in character, as the staff and students are selected from the Empire.

(vi) *Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained combatant officers for the Australian Regular Army, which was then known as the Permanent Military Forces. The College was officially opened on the 27th June, 1911. In January, 1931 the College was transferred to Victoria Barracks, Sydney, New South Wales, but it returned to Duntroon early in 1937. The conditions of entry are laid down in the "Royal Military College Regulations" and provide for admission by "normal entry", "service entry" and "special entry". The normal length of the course of instruction at the College for cadets admitted by normal entry is four years; for cadets admitted by service entry, three years; and for cadets admitted by special entry, one year. Fees are not charged for the equipment, instruction or maintenance of cadets. Cadets are paid a travelling allowance, an outfit allowance and a maintenance allowance. The maintenance allowance amounts to 7s. 6d. per diem for "normal entry" or "special entry" cadets, and £262 per annum for "special entry" cadets. This maintenance allowance defrays the cost of maintaining uniform and clothing, books, instruments, messing, washing and other miscellaneous items. The course of instruction is organized into military and civil departments. A Board of Studies advises the Commandant and reports to him on instructional matters, including the progress of cadets. The nature and duration of the course was temporarily modified during the late War. The number of staff cadets undergoing training at the College during the College year of 1947 comprised 103 Commonwealth cadets and 21 New Zealand cadets. New Zealand cadets have been trained at the College, since its foundation, for commissions in the New Zealand permanent forces under an arrangement made with the Government of that Dominion. The instructional staff of the College consists of military and civil members. On graduation, Commonwealth cadets are appointed to the Australian Regular Army in the rank of lieutenant and are then normally sent abroad for further regimental training.

(vii) *Rifle Clubs.* The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises a Commonwealth Council of Rifle Associations, which functions in an advisory capacity to the Minister and in the promotion of inter-empire and interstate rifle competitions, State Associations, District Unions and Clubs. Prior to 1931 the administration of the organization was the responsibility of the Secretary for Defence. From that year its control reverted to the Military Board and Rifle Clubs were affiliated as reserves to Militia Force units. They continued in this role until the outbreak of the recent war, when, owing to the urgent demands of the A.I.F. and A.M.F., supplies of ammunition were cancelled and all rifles of members were impressed, mostly on payment. In 1941 rifle clubs were placed in recess and, with the exception of annual miniature rifle competitions, remained inactive until August, 1946, when approval was given for the re-establishment of the movement on a civilian basis under the control of the Secretary, Department of the Army. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. From available statistics it is estimated that, of the membership mentioned, approximately 20 per cent. served overseas and a further 60 per cent. performed home service duties during the recent war. Rifle shooting activities have been resumed, and the strength position as at 30th June, 1948 was 993 clubs and 46,300 members.

(viii) *The Australian Battles Nomenclature Committee.* The Minister for the Army gave approval on the 25th July, 1947 for the formation of the Australian Battles Nomenclature Committee and for its terms of reference to be as follows :—

(*a*) to tabulate those operations fought in the Pacific Zones in the 1939–45 War which involved the Australian Military Forces ;

(*b*) to classify these operations in accordance with a definite system of nomenclature which will denote their relative importance ;

(*c*) to define the geographical and chronological limits of each operation ;

(*d*) to advise the United Kingdom Battles Nomenclature Committee regarding operations in zones other than the Pacific Zone in which the Australian Military Forces participated.

The inaugural meeting of this Committee was held at Victoria Barracks, Melbourne on 16th December, 1947, under the chairmanship of General Sir Thomas Blamey. At this meeting sub-committees were appointed to study the various campaigns in order to classify the operations into battles, actions, and engagements. For the purpose of allotting work to the sub-committees, the Battles Nomenclature Committee divided the campaigns in the Pacific Zone into the following six phases :—

(1) Defence of the outer islands until the time Japanese troops landed at Lae and Salamaua in New Guinea in March, 1942.

(2) The campaign in Papua.

(3) The Wau-Salamaua campaign.

(4) The British New Guinea campaign.

(5) The battle in the Australian mandated territories.

(6) The campaign in Borneo.

3. **British Commonwealth Occupation Force.**—For information on the participation of the Australian Military Forces in the occupation of Japan *see* § 1. 5 above.

4. **1939–45 War.**—(i) *General.* For a detailed account of the part played by the Australian Military Forces in the 1939–45 War, together with a chronological list of important events, *see* Official Year Book No. 36, pages 1016 to 1022.

(ii) *Gross Enlistments.* The number of gross enlistments as at 28th June, 1947 was as follows :—

Australian Imperial Force	271,279
Australian Army Nursing Service (A.I.F.)	1,563
Australian Army Medical Women's Service (A.I.F.) ..	1,432
Citizen Military Force	423,749
Australian Army Nursing Service (C.M.F.)	2,352
Australian Army Medical Women's Service (C.M.F.) ..	6,371
Australian Women's Army Service (C.M.F.)	24,053
Voluntary Detachment Corps	4,982
Total	735,781

Transfers to A.I.F. of C.M.F. and P.M.F. Personnel were as follows :—

Citizen Military Force and Permanent Military Force Personnel	(*a*)209,766
Australian Army Nursing Service Personnel	1,878
Australian Army Medical Women's Service Personnel ..	3,013
Total	214,657

(*a*) Includes 2,725 transfers of Permanent Military Force to Australian Imperial Force.

(iii) *Disbandments during* 1947. The Australian Imperial Force was disbanded on the 30th June, 1947, and replaced by the Interim Army. The Australian Women's Army Service, which had been formed on the 29th September, 1941 with the object of enlisting women for the replacement of men in rear areas, was also disbanded on the same date.

(iv) *Casualties.* Particulars of casualties will be found in § 6. following.

(v) *Decorations and Awards.* A list of the numbers of the various decorations and awards conferred appears in § 7. following.

§ 3. Naval Defence.

1. **State Systems.**—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 2, p. 1084.

2. **The Present System.**—(i) *General.* (*a*) *Royal Australian Navy up to end of* 1939–45 *War.* An outline of the development of Australian Naval policy was given in Official Year Book No. 3, p. 1060 and No. 12, p. 1012. Some account of the building of the Australian Fleet, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* An account of the growth and activities of the Royal Australian Navy during the 1939–45 War is given in Official Year Book No. 36, pp. 1023 *et seq.*

(*b*) *Post-war Programme.* In June, 1947 the post-war defence policy of the Commonwealth Government was announced by the Minister for Defence. A sum of £250,000,000 was to be expended over a period of five years in the carrying out of an approved programme (*see* § 1. 3 (ii) above). Of this amount, the Navy was to receive £75,000,000 allotted at the rate of £15,000,000 annually.

The following is a summary of the naval programme :—

(1) Ships in Commission—

Squadron : It is proposed that by the end of the programme, the Squadron should consist of :—2 Light Fleet Carriers, 2 Cruisers, 6 Destroyers.
Escort Forces : 3 Frigates.
Surveying Duties : 3 Survey ships and their tenders.
Training Ships : 1 Frigate, 2 Australian Minesweeping Vessels, 3 Air/Sea Rescue Vessels.
Auxiliary Vessels : 1 Ocean-going Tug, 1 Ammunition Carrier, 2 Boom Defence Vessels.

(2) Ships to be retained in Reserve and maintained in good condition against any future emergency—

One Cruiser, 2 Destroyers, 6 Frigates, 31 Australian Minesweepers, 39 Miscellaneous Vessels.

(3) Personnel—The total personnel required for the Royal Australian Naval Forces in 1947–48, exclusive of war commitments, is 10,450, comprising 4,040 sea-going forces and 6,410 for shore establishments and pools. The comparable figures to be reached in 1951–52 are 6,756 sea-going forces and 7,997 for shore establishments and pools—a total of 14,753.

(4) Naval Aviation—The first stage of the naval aviation plan is proposed to be implemented in 1947–48. This includes the acquisition (but not the commissioning) of the first carrier, the placing of the order for initial aircraft, and the setting up of recruiting, training and stores establishments for the naval aviation organization. The personnel required in the first year is 448, rising to 3,936 in 1951–52. The amounts provided over the five years for naval aviation total £11,976,000 for capital expenditure and £11,432,000 for maintenance.

(5) Ship Construction and Repair—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of expansion in war. An average sum of £2,500,000 is proposed to be expended annually on the completion of the present destroyer programme of two under construction and four to be laid down. This will make possible a continuous building programme at Cockatoo Dockyard, Sydney, and the Naval Dockyard at Melbourne.

(6) Shore Establishments—There will be the shore establishments essential for bases for commissioned ships and to provide administrative storing, repair and training facilities.

(c) *Naval Aviation.* Aircraft having become integral elements of a naval force, and, as the modern fleet is built around aircraft carriers, the main feature of the naval programme is the provision of two Light Fleet Carriers, each with a war-time complement of 36 aircraft. The status of Naval Aviation in relation to the Air Force is still under consideration.

(d) *The Relation of New Weapons.* Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of the great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authoritative opinion is of the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete within the near future.

(e) *Manus Island* (*Admiralties*). It is proposed to establish an R.A.N. base at Manus Island, which will replace the present New Guinea Base at Dreger Harbour, New Guinea.

(ii) *Naval Board.* With the introduction of a Naval Aviation Branch to the Australian Navy, a Naval Member for Air has been added to the Board which now consists of the Minister for the Navy with four Naval Members, one Finance Member and the Secretary, Department of the Navy (ex-officio); the seat of administration remains at Melbourne.

(iii) *Naval College.* Twenty-eight Cadet Midshipmen entered the Naval College for training in the year commenced January, 1948. In addition, there were six seventeen-year-old youths who entered for training for the Supply and Secretariat Branch. This is the largest number of entries since the year 1919, when 32 Cadets were admitted.

(iv) *Training Establishments.* Flinders Naval Depot, Victoria, remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established in Port Jackson, New South Wales.

(v) *System of Payment.* Since the close of hostilities in August, 1945, the entire pay code of the R.A.N. has been revised and a new code is now operative. The Government is at present giving active consideration to the change-over of the system of deferred pay for permanent personnel to a scheme of pensions comparable to the pension system already existant in the Royal Navy.

(vi) *The Naval Station.* On 28th March, 1947 the following limits of the Australian Naval Station were defined :—

East—From the equator at 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south along this meridian.

West—From 13° South, 95° 15′ East, south along this meridian to 30° South, thence west along this parallel to 80° East, thence south.

North—From the equator at 169° East to 134° East, thence to 5° North, 127° East, thence to 4° 15′ North, 120° East, thence to 2° North, 120° East, thence to 7° 45′ South, 115° 50′ East, thence through centre of Lombok Strait to 10° South, 115° 50′ East, thence to 13° South, 95° 15′ East.

(vii) *BCOF.* The contribution of the R.A.N. to the Occupational Forces of Japan early in 1948 was the maintenance of two destroyers on the Japanese Station and the constant employment of H.M.A.S. *Kanimbla* as a troopship.

3. **Ships of the Royal Australian Navy.**—The following table shows particulars of ships of the R.A.N. in commission and in reserve in October, 1947 :—

SHIPS OF THE ROYAL AUSTRALIAN NAVY, OCTOBER, 1947.

Vessel.	Description.	Displacement.	Power.
In Commission—		Tons.	H.P.
Australia	Cruiser	9,870	80,000
Shropshire	,,	9,870	80,000
Hobart	,,	7,100	72,000
Bataan	Destroyer	1,870	44,000
Arunta	,,	1,870	44,000
Warramunga	,,	1,870	44,000
Quiberon	,,	1,760	44,000
Quickmatch	,,	1,760	44,000
Shoalhaven	Frigate	1,544	5,500
Barcoo	,,	1,420	5,500
Condamine	,,	1,544	5,500
Lachlan	,,	1,420	5,500
Culgoa	,,	1,420	5,500
Murchison	,,	1,544	5,500

SHIPS OF THE ROYAL AUSTRALIAN NAVY, OCTOBER, 1947—*continued.*

Vessel.	Description.	Displacement.	Power.
In Commission—*continued.*		Tons.	H.P.
Swan	Sloop	1,060	2,000
Warrego	,,	1,060	2,000
Deloraine	Australian Mine Sweeper	650	1,800
Echuca	,, ,, ,,	650	1,800
Katoomba	,, ,, ,,	650	1,800
Lithgow	,, ,, ,,	650	1,800
Mildura	,, ,, ,,	650	1,800
Warrnambool	,, ,, ,,	650	1,800
Latrobe	,, ,, ,,	650	1,800
Gladstone	,, ,, ,,	650	1,800
Manoora	Landing Ship (Infantry)	10,856	..
Kanimbla	,, ,, ,,	10,985	..
Kurumba	H.M.A. Fleet Auxiliary	3,976	..
Miscellaneous—Forty-three			
In Reserve—			
Quadrant	Destroyer	1,760	44,000
Quality	,,	1,760	44,000
Queenborough	,,	1,760	44,000
Barwon	Frigate	1,420	5,500
Burdekin	,,	1,420	5,500
Diamantina	,,	1,420	5,500
Gascoyne	,,	1,420	5,500
Hawkesbury	,,	1,420	5,500
Macquarie	,,	1,420	5,500
Ararat	Australian Mine Sweeper	650	1,800
Bundaberg	,, ,, ,,	650	1,800
Castlemaine	,, ,, ,,	650	1,800
Cootamundra	,, ,, ,,	790	1,800
Fremantle	,, ,, ,,	650	1,800
Junee	,, ,, ,,	790	1,800
Wagga	,, ,, ,,	650	1,800
Parkes	,, ,, ,,	650	1,800
Glenelg	,, ,, ,,	650	1,800
Horsham	,, ,, ,,	650	1,800
Townsville	,, ,, ,,	650	1,800
Gympie	,, ,, ,,	650	1,800
Inverell	,, ,, ,,	650	1,800
Dubbo	,, ,, ,,	650	1,800
Rockhampton	,, ,, ,,	650	1,800
Kapunda	,, ,, ,,	650	1,800
Kiama	,, ,, ,,	650	1,800
Colac	,, ,, ,,	650	1,800
Cowra	,, ,, ,,	790	1,800
Bunbury	,, ,, ,,	650	1,800
Benalla	Surveying Vessel	560	1,800
Shepparton	,, ,,	560	1,800
Platypus	Depot Ship	3,455	3,500
Sprightly	Tug	763	1,875
Kookaburra	Boom Working Vessel	533	450
Miscellaneous—Sixty-five			

4. **Strength of Royal Australian Navy.**—The strength of the Royal Australian Naval forces, both permanent and reserves, at 31st December, 1947 is shown below :—

STRENGTH OF ROYAL AUSTRALIAN NAVAL FORCES (PERMANENT AND RESERVES), 31st DECEMBER, 1947.

Particulars.	Numbers Borne.		
	In Training.	Officers.	Men.
Royal Australian Navy—Sea-going	..	621	10,036
Emergency List ..	..	45	..
Retired	..	9	..
Royal Australian Naval Auxiliary Services ..	..	13	45
Cadet Midshipmen undergoing training at R.A.N. College	77	..	..
Royal Australian Naval Reserve (Sea-going) ..	..	51	..
Royal Australian Fleet Reserve	..	..	20
Royal Australian Naval Reserve	..	47	84
Royal Australian Naval Volunteer Reserve ..	..	61	4
Total	77	847	10,189

5. **Casualties, 1939–45 War.**—A table showing the numbers of casualties in the European and Pacific zones of operations is included in § 6.

6. **Decorations and Awards, 1939–45 War.**—Particulars of decorations and awards appear in § 7. following.

§ 4. Air Defence.

1. **General.** A statement respecting the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development, and zones and operations of the Royal Australian Air Force during the 1939–45 War appears in Official Year Book No. 36, p. 1027.

2. **Administration and Organization.**—The Department of Air is responsible for policy, for organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows :—Chief of the Air Staff, Air Member for Personnel, Air Member for Engineering and Maintenance, Air Member for Supply and Equipment, and Finance Member. The Secretary, Department of Air, is ex-officio a member of the Air Board.

Head-quarters of the Royal Australian Air Force is located at Melbourne. An Overseas Head-quarters is located at London and an Air Attaché at Washington, U.S.A.

With the exception of certain technical units which are allotted to the direct command of a Maintenance Group and those units (including three fighter Squadrons) located in Japan with the British Commonwealth Occupation Forces, the units of the Royal Australian Air Force are organized in five geographical areas throughout Australia.

The geographical areas of command are—

Southern Area—Head-quarters Southern Area controls Air Force units in Victoria, Tasmania and South Australia.

Eastern Area—Head-quarters Eastern Area controls Air Force units in New South Wales and Southern Queensland.

North-Eastern Area—Head-quarters North-Eastern Area controls Air Force units in northern Queensland, New Guinea and adjacent islands.

North-Western Area—Head-quarters North-Western Area controls Air Force units in Northern Territory.

Western Area—Head-quarters Western Area controls Air Force units in Western Australia.

The organization of the Royal Australian Air Force includes the following types of units :—

(*a*) R.A.A.F. Stations ;
(*b*) Bomber, Fighter, Transport, Tactical Reconnaissance, Survey, Target Towing, Communication and Search and Rescue Squadrons ;
(*c*) Aircraft Depots ;
(*d*) Stores Depots ;
(*e*) Transportation and Movement Offices ;
(*f*) Flying Training, Ground Training, Navigation, Radio and Air Armament Schools ;
(*g*) Royal Australian Air Force College ;
(*h*) Telecommunication Units.

3. **Aircraft.**—Some of the aircraft which are at present being used in the Royal Australian Air Force are Mustangs (fighters), Lincolns, Liberators, Mosquitos and Beaufighters (bombers), Dakotas (transports), Catalinas (general reconnaissance aircraft), and Ansons, Tiger Moths, Oxfords and Wirraways (training aircraft).

4. **Establishment.**—The present interim establishment of the Royal Australian Air Force is approximately 15,000 officers, members of R.A.A.F. Nursing Service and airmen. The interim establishment is being decreased continually with the completion of many war-time commitments and will be reduced to a Permanent Air Force establishment of approximately 12,000 officers, members of R.A.A.F. Nursing Service and airmen, plus officers and airmen of the Citizen Air Force.

5. **Casualties, 1939–45 War.**—For details of casualties incurred by R.A.A.F. personnel during the 1939–45 War *see* § 6. following.

6. **Decorations and Awards, 1939–45 War.**—The numbers of decorations and awards won by members of the R.A.A.F. during the 1939–45 War are shown in § 7. following.

§ 5. Enlistments in the Australian Services.

1. **Net Enlistments.**—The following table shows the number of net enlistments for full-time duty in each of the Services as at various dates in the years 1939 and 1941 to 1947. " Net enlistments " represents " gross enlistments " less discharges and deaths, and may be regarded as a measure of the strengths of the Services at those dates. It should be remembered, however, that deductions are not made for prisoners-of-war, deserters, and personnel absent sick, without leave, etc. and the figures are therefore higher than the " effective " strengths at the same dates. Totals for the last two years include British Commonwealth Occupation Force and Interim Force personnel.

NET ENLISTMENTS : AUSTRALIAN SERVICES.

At End of—	Royal Australian Navy.		Australian Military Forces.		Royal Australian Air Force.		All Services.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
Sept., 1939 ..	7,982	..	3,432	..	3,489	..	14,903	..	14,903
Nov., 1941 ..	19,367	..	285,725	2,375	59,782	1,410	364,874	3,785	368,659
Aug., 1942 ..	22,650	125	515,307	10,371	96,688	10,955	634,645	21,451	656,096
Aug., 1943 ..	31,335	1,647	515,085	27,485	139,526	16,922	685,946	46,054	732,000
Aug., 1944 ..	33,024	2,088	453,493	26,584	162,846	19,031	649,363	47,703	697,066
June, 1945 ..	37,693	2,720	403,042	24,034	158,542	17,974	599,277	44,728	644,005
June, 1946 ..	18,745	788	93,328	7,944	19,989	2,669	132,062	11,401	143,463
June, 1947 ..	11,145	31	31,375	817	11,943	101	54,463	949	55,412

2. **Gross Enlistments, 1939–45 War.**—The gross enlistments of war service personnel, plus permanent personnel at the beginning of the war, plus gross enlistments in the permanent forces, about the end of 1945 or early in 1946, numbered 993,000, and of these 66,100 were of females. Totals for each service, males and females respectively, were :—R.A.N., 45,800, 3,100 ; A.M.F., 691,400, 35,800 ; R.A.A.F. 189,700, 27,200.

§ 6. Casualties : Australian Services, 1939-45 War.

1. **General.**—This section contains revised information, in greater detail than was published in the previous issue of the Official Year Book, on casualties to members of each of the Australian Fighting Services during the 1939–45 War. The information is dissected into nature of casualty, theatre of war and zone of operations. A separate table is devoted to each of the following classes of casualties—(i) Battle Casualties, (ii) Non-battle Casualties on Operations or in Operational Areas, and (iii) Casualties not on Operations or in Operational Areas. A summary table is also included, showing all casualties in each service according to the nature of casualty. The figures for the respective Services are as comparable as inherent differences in the nature of the Services, their methods of operation and their systems of records will permit. The letterpress accompanying each table contains such explanation as is considered necessary to amplify or qualify the figures shown.

All casualties to servicemen and women during the 1939–45 War are included in these tables. Deaths and illnesses, etc. from natural causes are *not* included, and complete information for all services is not available. Deaths, however, numbered 3,667 (R.A.N., 148 ; A.M.F., 3,155 ; R.A.A.F., 364) and illnesses for the A.M.F. alone numbered 1,557,651 cases.

It should be noted that while the figures for "Killed" and "Prisoners-of-war, escaped, etc." refer to *persons*, those for "Wounded and injured" refer to *cases*. Thus totals represent the number of casualties, and not the number of persons who suffered therein.

2. **All Casualties, Australian Services, 1939–45 War.**—The following table is a summary of all casualties to members of the Fighting Services during the 1939–45 War.

ALL CASUALTIES: AUSTRALIAN SERVICES, 1939–45 WAR.(*a*)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
Killed, died of wounds, injuries, etc. ..	2,004	21,558	10,264	33,826
Prisoners-of-war escaped, recovered or repatriated	263	20,920	1,876	23,059
Wounded, injured, etc. (cases) ..	579	177,049	3,236	180,864
Total	2,846	219,527	15,376	237,749

(*a*) Excludes deaths and illnesses from natural causes.

3. **Battle Casualties, Australian Services, 1939–45 War.**—The table hereunder shows particulars of battle casualties under the headings of "War against Germany" and "War against Japan". The following brief explanations are considered necessary for the sake of preciseness.

R.A.N.: "Wounded and injured" includes all cases of wounded and injured in action *and on service.* Separation into operational and non-operational areas is not practicable.

A.M.F.: Figures include 222 deaths and 34 wounded in sinking of A.H.S. *Centaur* off the east coast of Australia and 15 deaths and 138 wounded in air raids on Darwin and Port Hedland.

R.A.A.F.: Figures refer to casualties incurred in operations against the enemy.

BATTLE CASUALTIES: AUSTRALIAN SERVICES, 1939–45 WAR.(*a*)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
WAR AGAINST GERMANY.				
Killed—				
Killed in action and missing, presumed dead	873	2,688	5,036	8,597
Died of wounds	3	701	58	762
Died of wounds while prisoner-of-war	..	55	22	172
Died of sickness, disease and injury while prisoner-of-war	..	95		
Total killed	876	3,539	5,116	9,531
Prisoners-of-war escaped, recovered or repatriated	26	7,055	1,459	8,540
Wounded and injured in action (cases)	26	8,578	529	9,133
Total	928	19,172	7,104	27,204

(*a*) Excludes deaths and illnesses from natural causes.

BATTLE CASUALTIES: AUSTRALIAN SERVICES, 1939–45 WAR(*a*)—*continued*.

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
WAR AGAINST JAPAN.				
Killed—				
Killed in action and missing, presumed dead	852	8,635	1,140	10,627
Died of wounds	38	1,093	65	1,196
Died of wounds while prisoner-of-war	63	48	126	5,597
Died of sickness, disease and injury while prisoner-of-war		5,360		
Total killed	953	15,136	1,331	17,420
Prisoners-of-war escaped, recovered or repatriated	237	13,865	417	14,519
Wounded and injured in action (cases)	553	13,275	253	14,081
Total	1,743	42,276	2,001	46,020
ALL THEATRES OF WAR.				
Killed—				
Killed in action and missing, presumed dead	1,725	11,323	6,176	19,224
Died of wounds	41	1,794	123	1,958
Died of wounds while prisoner-of-war	63	103	148	5,769
Died of sickness, disease and injury while prisoner-of-war		5,455		
Total killed	1,829	18,675	6,447	26,951
Prisoners-of-war escaped, recovered or repatriated	263	20,920	1,876	23,059
Wounded and injured in action (cases)	579	21,853	782	23,214
Total	2,671	61,448	9,105	73,224

(*a*) Excludes deaths and illnesses from natural causes.

4. **Non-Battle Casualties on Operations or in Operational Areas, Australian Services, 1939–45 War.**—The next table shows particulars of casualties, other than in battle, incurred on operations or in operational areas, classified according to theatre of war.

R.A.N.: "Killed, etc." represents mainly fatal accidents on service, including drownings. All personnel injured on service are included in the previous table.

A.M.F.: Figures include all casualties in operational areas other than actual battle casualties.

R.A.A.F.: Figures represent casualties in operational areas, but not directly the result of operations. They include all casualties in the United Kingdom other than those incurred in operations.

NON-BATTLE CASUALTIES ON OPERATIONS OR IN OPERATIONAL AREAS: AUSTRALIAN SERVICES, 1939–45 WAR.(a)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
WAR AGAINST GERMANY.				
Killed, died of injuries, etc.	40	352	1,496	1,888
Wounded, injured, etc. (cases) ..	..	9,196	845	10,041
Total	40	9,548	2,341	11,929
WAR AGAINST JAPAN.				
Killed, died of injuries, etc.	45	736	689	1,470
Wounded, injured, etc. (cases) ..	..	24,200	633	24,833
Total	45	24,936	1,322	26,303
ALL THEATRES OF WAR.				
Killed, died of injuries, etc.	85	1,088	2,185	3,358
Wounded, injured, etc. (cases) ..	..	33,396	1,478	34,874
Total	85	34,484	3,663	38,232

(a) Excludes deaths and illnesses from natural causes.

5. **Casualties not on Operations or in Operational Areas, Australian Services, 1939–45 War.**—The figures hereunder relate to all casualties other than those in paras. 3 and 4 above.

R.A.N.: "Killed, etc." represents fatal accidents mainly ashore. All personnel injured on service are included in Battle Casualties.

A.M.F.: Figures include all casualties during training and from traffic accidents, etc.

R.A.A.F.: Figures for "Australia" include all training casualties in Australia; those for "Overseas" include all casualties incurred in Canada and Rhodesia. Only the more serious cases which were reportable to next-of-kin are represented. Figures for others are not available.

CASUALTIES NOT ON OPERATIONS OR IN OPERATIONAL AREAS : AUSTRALIAN SERVICES, 1939–45 WAR.(*a*)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
		AUSTRALIA.		
Killed, died of injuries, etc.	64	1,795	1,441	3,300
Wounded, injured, etc. (cases) ..	..	121,800	873	122,673
Total	64	123,595	2,314	125,973
		OVERSEAS.		
Killed, died of injuries, etc.	26	..	168	194
Wounded, injured, etc. (cases) ..	..	..	60	60
Total	26	..	228	254
		TOTAL.		
Killed, died of injuries, etc.	90	1,795	(*b*) 1,632	(*b*) 3,517
Wounded, injured, etc. (cases) ..	..	121,800	(*c*) 976	(*c*) 122,776
Total	90	123,595	2,608	126,293

(*a*) Excludes deaths and illnesses from natural causes. (*b*) Includes 23 members of W.A.A.A.F. not allocated between Australia and Overseas. (*c*) Includes 42 members of W.A.A.A.F. and one of R.A.A.F.N.S. not allocated between Australia and Overseas.

§ 7. Decorations and Awards, 1939–45 War.

The numbers of the various decorations and awards conferred on members of each of the fighting forces for gallantry or other meritorious service during the 1939–45 War, revised since the previous issue of the Official Year Book, appear on the opposite page.

DECORATIONS AND AWARDS: AUSTRALIAN SERVICES, 1939–45 WAR.

Decoration or Award.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
British Decorations or Awards—				
Victoria Cross (V.C.)	..	17	2	19
George Cross (G.C.)	4	1	..	5
Knight Grand Cross Order of British Empire (G.B.E.)	..	1	..	1
Knight Commander Order of Bath (K.C.B.) ..	..	2	..	2
Knight Commander Victoria Order (K.C.V.O.)	1	..	..	1
Knight Commander Order of British Empire (K.B.E.)	..	4	..	4
Companion Order of Bath (C.B.)	3	20	4	27
Companion Order of St. Michael and St. George (C.M.G.)	1	..	..	1
Commander Order of British Empire (C.B.E.)	8	93	15	116
Officer Order of British Empire (O.B.E.) ..	31	230	61	322
Distinguished Service Order (D.S.O.) ..	18	177	68	263
Distinguished Service Order Bar	3	21	4	28
Member Victorian Order (M.V.O.)	..	..	1	1
Member Order of British Empire (M.B.E.) ..	42	381	96	519
Royal Red Cross (R.R.C.)	..	18	3	21
Royal Red Cross (Associate)	..	32	4	36
Distinguished Service Cross (D.S.C.) ..	149	..	..	149
Distinguished Service Cross, Bar	10	..	..	10
Distinguished Service Cross, Second Bar ..	2	..	..	2
Military Cross (M.C.)	..	500	7	507
Military Cross, Bar	..	15	..	15
Distinguished Flying Cross (D.F.C.) ..	1	1	2,179	2,181
Distinguished Flying Cross, Bar	..	..	124	124
Distinguished Flying Cross, Second Bar ..	..	..	1	1
Air Force Cross (A.F.C.)	..	..	165	165
Albert Medal	1	..	..	1
Medal for Distinguished Conduct in the Field (D.C.M.)	..	197	2	199
Conspicuous Gallantry Medal (C.G.M.) ..	1	..	10	11
George Medal (G.M.)	9	13	20	42
George Medal, Bar	3	..	..	3
Distinguished Service Medal (D.S.M.) ..	157	..	..	157
Distinguished Service Medal, Bar	2	..	..	2
Military Medal (M.M.)	..	983	4	987
Military Medal, Bar	..	5	..	5
Distinguished Flying Medal (D.F.M.) ..	..	..	409	409
Distinguished Flying Medal, Bar	..	..	2	2
Air Force Medal (A.F.M.)	..	..	16	16
British Empire Medal (B.E.M.)	35	168	57	260
Mention in Despatches	601	6,189	1,786	8,576
King's Commendation for Brave	..	12	..	12
Knight of Grace of Order of St. John of Jerusalem	..	3	..	3
Commander-in-Chief Cards	..	1,082	..	1,082
Commendation Cards	12	177	168	357
Total British Decorations or Awards ..	1,094	10,342	5,208	16,644
Foreign Decorations or Awards	57	145	171	373
Grand Total	(*a*)1,151	(*b*)10,487	(*c*)5,379	17,017

(*a*) In addition, 45 decorations or awards were made to British personnel in Australian Services, and one to a civilian with the Australian Services. (*b*) In addition, 18 decorations or awards were made to British or Allied personnel on loan to A.M.F., 41 to civilians with A.M.F., and 363 to natives with A.M.F. (*c*) Excludes decorations and awards to R.A.F. personnel on loan to R.A.A.F. and to members of R.A.F. who were Australian by birth—particulars are not available.

Foreign awards include those of the United States of America, Russia, Greece, Poland France, Holland, Belgium and Lebanon.

§ 8. Australian Troops (1914–18 War).

Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the 1914–18 War are given in Official Year Book No. 16, pp. 628 *et seq.*

§ 9. Department of Munitions.

1. **General.**—Information regarding munitions production prior to the 1939–45 War appears in earlier issues of this publication (*see* No. 18, pp. 612–616 and No. 32, p. 241). A statement of the main developments in the organization and output of the Department of Munitions during the 1939–45 War—covering the period to 30th June, 1945—will be found in Official Year Book No. 36, pp. 1037–1068.

The end of the war with Japan, although it came suddenly on 15th August, 1945, had been anticipated, so that departmental plans for a "tapering off" of munitions production had already been prepared. An essential part of the plan was the lifting of "controls" to the greatest extent practicable, so that civilian requirements of manufactured goods might be put into production at the earliest possible moment, thus providing immediate employment for the displaced labour. So effective was the transition of the munitions organization from war to peace-time conditions that the change-over passed unnoticed in its effect upon employment. Nevertheless, the personnel employed, which stood at 28,398 on 30th June, 1945, had become 12,413 by 30th June, 1946, including some 3,000 engaged solely upon manufacturing for commercial industry.

2. **Functions of the Department.**—An outline of the functions of the Department was given in Year Book No. 36. They are founded on the principle that the Department acts as the medium for producing the munitions requirements of the armed forces, and such other requirements as may be found necessary. Responsibility for the provision of funds necessary to meet all expenses incurred in production, or in the development of productive capacity in connexion with any demand for supplies, rests on the body or authority making the demand.

3. **Controls Exercised by the Department of Munitions.**—As the war position became easier, the Department was able progressively to relax the controls operated by it during the war. On 3rd December, 1945 any remaining controls of materials (including ferrous and non-ferrous metals) over which jurisdiction had still been retained were transferred, as far as the Commonwealth was concerned, to the Department of Works and Housing.

Control of machine tools, ball and roller bearings, electrical machinery, and radio and signal parts was relinquished by the end of December, 1945, the control of hand tools on 17th June, 1946, and of industrial chemicals in October, 1945. In March, 1946 control of timber was transferred to the Department of Works and Housing.

4. **Government Munitions Factories and Establishments.**—On the defeat of Germany, planning commenced for a reduction of war activities in the factories and a readjustment towards peace-time activities. At 30th June, 1945 there were 23 of the war-time peak number of 47 factories still in operation, but 14 ceased manufacturing during the year, leaving 9 to be continued as a post-war organization.

The following is a list of the 9 remaining munitions factories which operated together with the Drawing Office and ancillary Stores and Transport Branches, showing capital valuations as at 30th June, 1946.

GOVERNMENT MUNITIONS FACTORIES AND ESTABLISHMENTS: CAPITAL VALUATIONS, 30th JUNE, 1946.

Establishment.	Land.	Buildings and Works.	Plant and Equipment.	Total.
Ammunition Factories—	£	£	£	£
Footscray, Victoria . .	17,849	1,040,744	2,594,558	3,653,151
Finsbury, South Australia . .	22,427	1,067,475	866,516	1,956,418
Ordnance Factories—				
Maribyrnong, Victoria . .	5,456	1,208,955	3,930,062	5,144,473
Echuca, Victoria . .	2,001	101,082	227,902	330,985
Bendigo, Victoria . .	19,187	625,348	1,586,762	2,231,297
Drawing Office—				
Maribyrnong, Victoria . .	(a)	(a)	(a)	(a)
Munitions Supply Laboratories—				
Maribyrnong, Victoria . .	144	257,585	451,333	709,062
Explosives Factories—				
Maribyrnong, Victoria . .	50,989	1,749,873	1,690,277	3,491,139
Mulwala, New South Wales . .	810	1,816,467	1,452,074	3,269,351
Salisbury, South Australia . .	49,936	5,042,881	2,074,313	7,167,130
Small Arms Factory—				
Lithgow, New South Wales . .	6,874	846,534	3,178,649	4,032,057
Sub-total	175,673	13,756,944	18,052,446	31,985,063
Stores and Transport Depots—				
Maribyrnong, Victoria . .	35,743	883,671	391,323	1,310,737
Sydney, New South Wales . .	2,725	860,188	202,277	1,065,190
Brisbane, Queensland . .	. .	51,931	14,075	66,006
Finsbury North, South Australia . .	33,631	674,313	103,261	811,205
Perth, Western Australia . .	656	44,785	19,760	65,201
Hobart, Tasmania . .	1,106	34,106	6,862	42,074
Oaklands, New South Wales . .	2,701	386,873	69,616	459,190
Sub-total	76,562	2,935,867	807,174	3,819,603
Total	252,235	16,692,811	18,859,620	35,804,666

(a) Included in Ordnance Factory, Maribyrnong.

5. **Munitions Production.**—Substantial decreases in practically all grades of weapons and ammunition followed the falling-off in the demands received from the Services during the year 1945–46. Main items produced were rifles, small arms and light anti-aircraft ammunition, as well as a certain amount of bombs and mines, machine guns and mountings. There was no production of mortars, Hispano and Polsten cannon, Bofors, anti-aircraft, or tank-attack guns.

Other types of production included electrical equipment, field cable, engineering equipment, fabric mesh, trailers, refrigeration units, radio transmitters and receivers, signal equipment and small craft.

6. **Value of Output.**—The following figures of value of output of the Government munitions establishments provide an over-all picture of the rise and fall in munitions production between 1939 and 1946. They cover not only production connected with the fulfilment of Service orders for munitions, but also the manufacture of equipment such

as tools and gauges for use within the factories, as well as work performed on capital account, e.g., manufacture of machine tools, plant installation costs, and minor construction work. For 1945–46 the figures include £606,000 on commercial account. As far as the Laboratories are concerned, the figures cover expenditure connected with the scientific functions of the establishment, as well as costs of production of respirators, and repair, reconditioning and servicing of instruments, etc.

The figures do not represent value of finished product in any one year, but are the total costs of production during each of the years 1939–40 to 1945–46 and include, therefore work in progress at the end of each year.

To avoid over-statement, stores or components issued by one Government factory to another have been excluded from the value of production of the factory which received them.

GOVERNMENT MUNITIONS FACTORIES : VALUE OF OUTPUT.

Year.	Ammunition.	Explosives.	Ordnance.	Small Arms.	Munitions Laboratories.	Total.
	£	£	£	£	£	£
1939–40 ..	1,501,493	729,046	846,998	421,448	192,895	3,691,880
1940–41 ..	4,211,161	1,897,082	2,031,935	1,555,483	494,632	10,190,293
1941–42 ..	9,375,404	5,569,316	3,940,818	3,052,569	874,403	22,812,510
1942–43 ..	12,014,516	9,945,741	5,261,267	6,120,307	900,796	34,251,627
1943–44 ..	8,072,923	7,636,636	4,313,949	5,267,507	526,728	25,817,743
1944–45 ..	4,413,210	4,391,712	2,749,599	2,399,252	409,651	14,363,424
1945–46 ..	1,713,869	1,321,443	1,620,785	996,603	316,362	5,969,062
Total ..	41,302,576	31,490,976	20,765,351	19,822,169	3,715,407	117,096,539

7. **Employment.**—Employment in administrative sections of the Department of Munitions and at munitions factories and establishments at the 30th June, 1939 to 1946 was as follows. The table illustrates the rise and decline of female employment in the factories.

ADMINISTRATIVE OFFICES AND GOVERNMENT MUNITIONS FACTORIES AND ESTABLISHMENTS : EMPLOYMENT.

30th June—	Administrative Offices.			Government Munitions Factories and Establishments.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1939	12	6	18	4,481	574	5,055	4,493	580	5,073
1940	199	94	293	10,315	1,642	11,957	10,514	1,736	12,250
1941	980	493	1,473	18,976	5,756	24,732	19,956	6,249	26,205
1942	2,107	1,617	3,724	31,973	16,245	48,218	34,080	17,862	51,942
1943	3,118	3,115	6,233	32,210	22,548	54,758	35,328	25,663	60,991
1944	2,573	2,880	5,453	20,368	12,035	32,403	22,941	14,915	37,856
1945	2,252	2,403	4,655	16,087	7,656	23,743	18,339	10,059	28,398
1946	1,698	1,146	2,844	8,549	1,020	9,569	10,247	2,166	12,413

8. **Salaries, Wages and like Payments.**—The importance of the munitions effort in respect of public income is demonstrated by the following statement of payments :—

MUNITIONS ADMINISTRATION, GOVERNMENT MUNITIONS FACTORIES, ETC. : SALARIES, WAGES AND LIKE PAYMENTS.

Year.	Munitions Administration.	Government Munitions Factories and Establishments.	Technical Training Scheme.	Total.
	£	£	£	£
1939–40	67,402	2,073,007	26,928	2,167,337
1940–41	160,705	5,780,385	635,944	6,577,034
1941–42	817,211	11,676,397	753,884	13,247,492
1942–43	1,725,626	17,470,114	529,237	19,724,977
1943–44	1,953,774	14,827,086	83,458	16,864,318
1944–45	1,707,721	8,632,992	56,695	10,397,408
1945–46	1,291,521	4,566,846	1,497	5,859,864

9. **Production Directorates.**—(i) *General.* During the war years eight directorates were set up to develop industries for the production of various groups of munitions. At the peak period of production these directorates and associated directive bodies totalled sixteen. By June, 1945 twelve of them were still active. At 30th June, 1946 seven production directorates were still in existence—Gun Ammunition, Explosives Supply, Ordnance Production, Machine Tools, Radio and Signal Supplies, Small Craft and Materials Supply. A brief description of the operations of these directorates follows.

(ii) *Gun Ammunition.* Created in May, 1940, this directorate came into being when arrangements had been made for the creation and supervision of annexes used in producing bombs, fuses, mines, shot and shell. During the year 1945–46 annual capacity was greatly reduced following liquidation and transfer of production units, though some programmes, such as 25-pounder shell, fuses, bright nuts and bolts, etc., were continued. When production in annexes ceased, plant and installations were released in a rapid transition from war to peace production.

(iii) *Explosives Supply.* The objectives of this directorate were the manufacture of high explosives, and the filling of ammunition and pyrotechnic stores for the fighting services.

During 1945–46 the war-time production programme tapered off rapidly. The peace-time production of ammonium sulphate, methanol, etc., was being proceeded with, the necessary additions being undertaken at existing plants.

(iv) *Ordnance Production.* This directorate's function was to create and maintain production of various types of equipment for the fighting forces. The falling away in production is illustrated by the fact that, whereas at the beginning of July, 1945 the programme consisted of 195 active projects (value £6,500,000), in June, 1946 only 27 of these projects remained, the value being less than £200,000.

(v) *Machine Tools and Associated Equipment.* This directorate controlled production, reconditioning and disposal of machine tools, ball-bearings, electrical equipment, hand tools, etc. Up to 30th June, 1946, 24,214 machine tools were issued to the fighting services ; 1,380 to other governments ; 12,655 to Commonwealth departments other than that of Munitions ; 54,422 to the Department of Munitions ;, and 436 to Technical Schools. Deliveries within Australia totalled 2,596. Machines sold to Australian firms and others numbered 13,025, valued at £3,455,149 ; 12,588 were sold at disposal sales.

(vi) *Radio and Signal Supplies.* The function of this directorate was to organize and control production in commercial industry of radar equipment, radio frequency communication equipment, and non-radio signal equipment, for the Services.

At the end of June, 1945 the Directorate still had 151 projects in hand. Undelivered equipment at that time totalled £5,868,000, and deliveries were being made at the rate of £400,000 worth of equipment per month, with about £250,000 worth of orders being received monthly.

At the end of the war, about £5,500,000 worth of electronic equipment was still on order. Arrangements were put in hand to proceed with the production of civilian radios in anticipation of the changing over of radio firms from defence to civil production.

The total value of equipment delivered to the Services to 30th June, 1946 was £17,500,000.

(vii) *Small Craft Construction.* Following the end of the war in the Pacific, many orders which had been received from the Royal Australian Navy, the Australian Army, and United States of America authorities were cancelled. A summary of production as at 30th September, 1945 showed that 1,823 powered and 4,165 non-powered vessels had been completed and handed over, with 29,366 miscellaneous craft. By 30th June, 1946 the only outstanding Service orders were—for the Australian Army, 10 craft (9 complete); Royal Australian Navy, 27 craft (3 complete); Royal Australian Air Force, 2 craft; Royal Navy, 2 craft; and Netherlands East Indies, 6 craft (5 complete).

(viii) *Materials Supply.* The primary function of this directorate was the bulk purchase and distribution of reserves of materials required by munitions factories and annexes for production. Under the Control of Essential Materials Order about 600 items, including iron and steel, non-ferrous metals and chemicals were under control. Following the end of hostilities, controls on solder, horse-shoe and chain manufacture and collapsible tubes were revoked in September, 1945. Sales in July and August, 1945 of surplus materials such as copper wire bars, glycerine, zinc, soda nitrate, antimony, tin, zinc oxide, tallow, and aluminium powder amounted to £3,898,099. The directorate closed down on 7th November, 1945. Sales during the last month of its activity totalled £74,000.

10. **Liquidations.**—The total cost of surplus munitions property disposed of during the twelve months ended 30th June, 1946 was £19,000,000. The value of the balance of declared property for disposal at cost at 30th June, 1946 was £20,500,000.

11. **Directorate of Stores and Transport.**—This directorate's functions during the war included the warehousing of munitions materials and products, and their transport by rail, road or sea, as well as the storage and transport of materials and products for other departments. When the war ended, the Department of Munitions occupied 4¾ million square feet of storage space, of which 3¾ million square feet was Government-owned and 1 million held under tenancy. By 30th June, 1946, 550,000 square feet of the latter had been vacated and returned to the owners.

12. **Finance and Accounts.**—(i) *General.* During 1945–46 practically all the energies of the Branch were devoted to winding-up war-time operations. These activities included:—(*a*) the settlement of claims by contractors; (*b*) termination of war-time agreements; (*c*) securing repayment of loans to contractors for war purposes; (*d*) closing down of annexes and consequent adjustment of advance accounts.

(ii) *Expenditure.* (*a*) *Summary.* In the table following the total expenditure incurred on account of munitions in 1945–46 is compared with the previous year:—

MUNITIONS: TOTAL EXPENDITURE.

Particulars.	1944–45.	1945–46.
	£'000.	£'000.
Parliamentary Appropriations (including Reciprocal Lend-Lease) and Lend-Lease	25,620	23,656
Trust Fund Accounts	83,083	46,059
Munitions Department for other Administrations	2,851	3,924
Total	111,554	73,639

Details of expenditure under Parliamentary Appropriations may be found in § 6, Chapter XV.—"Public Finance".

(*b*) *Trust Funds.* The table hereunder shows the comparison between expenditure from the various Munitions Trust Funds during the years 1944–45 and 1945–46 :—

MUNITIONS : TRUST FUND EXPENDITURE.

Fund.	1944–45.	1945–46.
	£'000.	£'000.
Government Munitions Factories and Establishments ..	20,501	14,245
Manufacture of Munitions	53,831	27,064
Machine Tools	2,675	1,019
Materials	6,074	3,708
Aluminium Production	2	23
Total	83,083	46,059

13. **Australian Aluminium Production Commission.**—Basic plans for the manufacture of aluminium ingot in Australia, as a defence measure designed to make this country independent of overseas supplies, were approved by the Commonwealth Government in April, 1941. In April, 1944 an agreement was made between the Commonwealth and Tasmanian Governments for the establishment of the industry in Tasmania, cheap power being available from the hydro-electric resources of that State. Covering legislation was introduced, and received Royal Assent on 7th December, 1944. The Australian Aluminium Production Commission was constituted on 1st May, 1945; it consists of two representatives and two deputies acting for the Commonwealth, and an equal number of representatives and deputies for Tasmania.

Workable deposits of bauxite (aluminium ore) exist in Victoria, New South Wales and Tasmania, the highest grade deposits being located in the Boolarra-Mirboo North district of Victoria. Deposits also exist in Queensland and Western Australia.

Analysis of Tasmanian and Victorian bauxite samples sent to New York for testing has demonstrated that it is possible to establish an Australian aluminium production industry on a sound and practical basis. Finance for the undertaking is provided by a fund to which contributions on a £1 for £1 basis are made by the Commonwealth and Tasmanian Governments.

§ 10. Aircraft Production.

1. **General.**—An account of aircraft production activities during the 1939–45 War and up to the year 1945–46 appears in Official Year Book No. 36, pp.1068–1073. In this issue activities during 1946–47 are dealt with.

From 1st July to 31st October, 1946 all Commonwealth Government functions in regard to the manufacture of fighter, bomber and trainer aircraft and of aero engines and of other aircraft components required for Royal Australian Air Force purposes were administered by the Department of Aircraft Production. Aircraft repair and overhaul activities carried out for the R.A.A.F. in civilian establishments, as distinct from the Service workshops conducted by the R.A.A.F., were also a function of the Department of Aircraft Production, together with the responsibility of supplying aircraft and engine spare parts.

As from 1st November, 1946 the activities of the Department of Aircraft Production and those of the Department of Munitions were amalgamated and the aircraft production and repair and overhaul activities were conducted by the Division of Aircraft Production of the Department of Munitions.[*]

2. **New Aircraft Projects.**—On 23rd August, 1946 Cabinet approved the production in Australia of jet-propelled fighter aircraft to introduce into the R.A.A.F. the most modern types of operational aircraft. The project was based upon (*a*) the manufacture by the Commonwealth Aircraft Corporation of 60 Rolls-Royce "Nene" turbo-jet engines, plus spares; and (*b*) the manufacture by De Havilland Aircraft Pty. Ltd. of 50 De Havilland "Vampire" jet-propelled fighter aircraft, plus spares, including the installation in the aircraft of Nene engines as manufactured by the Commonwealth Aircraft Corporation.

In approving these projects, Cabinet was influenced by the necessity (*a*) to commence the replacement of reciprocating-engined aircraft with the modern turbine-jet types in order to keep the R.A.A.F. up to date; (*b*) to provide a programme to assist in maintaining in work two of the major aircraft production units retained in accordance with the National Defence Policy of having available at all times a nucleus of aircraft manufacturing capacity whose output could be rapidly expanded in an emergency; (*c*) to establish and maintain potential capacity for the manufacture and development of the latest types of jet-propelled aircraft; and (*d*) to give practical effect to the decision to equip the R.A.A.F., for strategic reasons, with aircraft and engine types which were also standard equipment for the Royal Air Force.

The gas-turbine engine was developed during the years immediately prior to and following the outbreak of the 1939-45 War and was brought into operational use by both the Germans and the Allied Forces before the war in Europe ended. It was recognized as being a revolutionary new type of prime mover that was expected quickly to become standard equipment for fighter types of aircraft and eventually to supersede the piston type engine for all high speed operational aircraft. Its production introduced new workshop techniques and new alloy materials which were unknown to Australian industry. Consequently a strong team of engineers and workshops technicians from the Commonwealth Aircraft Corporation's factory was sent to the United Kingdom early in 1946 to make a detailed study of the production equipment and manufacturing processes used in the Rolls-Royce Company's Nene engine factory in order to supervise the introduction of the new project into the Australian workshop on their return. The Vampire aircraft is a single-engined, single-seated fighter with maximum continuous level speed of approximately 550 miles an hour, operational service ceiling of 40,000 feet, and economical cruising range of 1,000 miles.

3. **Aircraft, Engine and Other Production.**—Aircraft manufactured during 1946-47 comprised thirteen Lincoln four-engined heavy bombers from the Government Aircraft Factories, thirteen Mosquito fighter-bomber aircraft by De Havilland Aircraft Pty. Ltd. and four Mustang fighters and one Wirraway advanced trainer by the Commonwealth Aircraft Corporation. The Tudor project, which had been developed by the Government aircraft factories on the basis of production of twelve military transport aircraft, was restricted during the year to not more than two aircraft.

Production of Rolls-Royce Merlin engines continued at the Aircraft Engine Factory conducted at Lidcombe, New South Wales, by the Commonwealth Aircraft Corporation for the Commonwealth. These engines are required for installation in Lincoln aircraft but, because the rate of production of that type of aircraft had been restricted to a minimum to meet R.A.A.F. requirements, the Merlin engine production programme has also been retarded and the only engine completed during 1946-47 was one required by the Government Aircraft Factories for engineering purposes.

During 1946–47 annexes established during the war for the manufacture of propellers, retractable undercarriages and heavy forgings in light alloy metals continued in operation as part of the nucleus of aircraft manufacturing capacity retained for policy reasons.

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[*] As from the beginning of April, 1948 the Supply functions of the Department of Supply and Shipping were also amalgamated with the functions of the Department of Munitions and the Division of Aircraft Production became a section of the Department of Supply and Development.

The following table shows the numbers of the various types of aircraft and engines produced during the years 1939–40 to 1946–47.

AIRCRAFT AND ENGINES : PRODUCTION, AUSTRALIA.

Type.	1939–40.	1940–41.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46.	1946–47.
AIRCRAFT.								
Beaufort	..	..	76	285	312	27	..	..
Beaufighter	..	..	..	..	3	281	80	..
Lincoln	..	..	..	..	..	..	1	13
Wirraway	75	225	320	..	30	60	46	1
Wackett Trainer ..	..	13	187	..	..	..	..	..
Boomerang	..	..	..	105	103	42	..	..
Mustang	..	..	..	..	..	4	73	4
Tiger Moth	8	453	508	66	..	35	..	..
DH. Dragon	..	..	..	87	..	..	..	..
Mosquito	..	..	..	..	6	80	91	13
Gliders	..	..	..	6	2	..	..	..
Total	83	691	1,091	549	456	529	291	31
ENGINES.								
Twin-row Wasp ..	..	..	66	231	343	228	2	..
Single-row Wasp ..	76	195	291	86	32	..	..	..
Gipsy Major	..	319	318	461	202	..	..	..
Rolls-Royce " Merlin " ..	..	..	..	..	..	..	..	1
Total	76	514	675	778	577	228	2	1

Of the total aircraft produced (3,721), 43 per cent. were operational type and 57 per cent. trainer type. Government aircraft factories produced 67 per cent. of the operational aircraft, the Commonwealth Aircraft Corporation Pty. Ltd. 21 per cent. and the De Havilland Aircraft Pty. Ltd. 12 per cent. The last two organizations shared the whole of the trainer production, 45 per cent. and 55 per cent. respectively.

4. **Repair and Overhaul.**—It is the policy of the R.A.A.F. as far as practicable to return aircraft and aero engines requiring major overhaul to the aircraft and engine manufacturing establishments in which they were produced. Certain other R.A.A.F. aircraft and engine repair and overhaul is also allotted to civilian contractors for policy purposes instead of being undertaken in the R.A.A.F workshops. Under this arrangement R.A.A.F. Dakota transport aircraft were repaired and overhauled in workshops conducted by the Division of Aircraft Production at Parafield, South Australia, and Lincoln heavy bomber aircraft at the Government Aircraft Factories at Fishermen's Bend. Twin-row Wasp engines are allotted for overhaul to the Commonwealth Aircraft Corporation's factory at Fishermen's Bend and Rolls-Royce Merlin engines are handled by the same company at the Lidcombe engine factory. During 1946–47, under an arrangement with the Royal Air Force Head-quarters at Singapore, twin-row Wasp engines commenced to arrive in Australia for overhaul at the Commonwealth Aircraft Corporation's plant at Fishermen's Bend.

5. **Beaufort Housing Project.**—When hostilities ceased in 1945, War Cabinet directed that surplus capacity becoming available in Munitions and Aircraft Production establishments could be used to relieve the acute housing position, if practicable. To this end, the Department of Aircraft Production had collaborated with the Department of Works and Housing and with the Victorian Housing Commission in the design of a prefabricated steel house which could be manufactured on factory mass production lines in the Government Aircraft Factories. A prototype of the house, erected in Melbourne in June, 1946 for public inspection, was very favourably received, but the Victorian Government refrained from placing an order for the large-scale production of the houses until the prospective availability of light gauge sheet steel (then in extremely short supply), as required for the walls and roof panels of the house, had been thoroughly examined.

During February, 1947, however, an order for 5,000 Beaufort houses at a cost of £1,050 each—covering production and assembly on site but not site works (roads, paths, etc.) or land purchase—was placed on the Commonwealth by the Victorian Government through the Victorian Housing Commission. Acceptance of the order was approved by Cabinet during the same month and concurrently Cabinet approved the extension of the project to cover the production and erection of 5,500 houses for the War Service Homes Division of the Department of Works and Housing, at a cost of £1,100 each. These houses included certain refinements not provided for in the Victorian Housing Commission order, but essentially the houses were the same.

The establishment of facilities for the quantity production of the Beaufort house was immediately commenced, together with the procurement of supplies of raw materials and fittings and the manufacture of tooling. The project was being steadily developed, but the decision of the Victorian Government in January, 1948 to cancel the order for houses for the Victorian Housing Commission and to discontinue supplies of light gauge steel sheet to the Government Aircraft Factories for house construction brought about the abandonment of the whole project as from the completion of 85 houses, for which arrangements were already in hand.

6. **Australian Shipbuilding Board**.—(i) *General*. The Australian Shipbuilding Board was created on 26th March, 1941. The Board, which was directly responsible to the Minister and Director-General of Munitions, consisted of a Chairman, the Director of Shipbuilding, a person appointed on the nomination of the Naval Board, a public accountant known as the Finance Member, a person representative of the employees, and any other person considered necessary by the Minister.

Following an exhaustive survey made in order to select from existing shipyards those deemed most suitable for the Board's projected operations, the Government decided to provide financial assistance to the undermentioned contractors to enable them to expand their facilities to the required extent:—Mort's Dock and Engineering Co. Ltd., Sydney; Melbourne Harbour Trust Commissioners, Williamstown (now H.M.A. Naval Dockyard); and Evans Deakin & Co. Ltd., Brisbane. Facilities were also provided at Cockatoo Island, Sydney—which is Commonwealth property leased to the Cockatoo Docks & Engineering Co. Pty. Ltd. The Broken Hill Pty. Co. Ltd. shipyard at Whyalla, South Australia, was built at the Company's own expense. Arrangements were made between the Commonwealth and the State for expansion of the facilities at the New South Wales Government Engineering and Shipbuilding Undertaking, Newcastle.

(ii) *Construction Programme*. The original scheme was to undertake a long-range building programme covering the construction of 60 "A" class 9,000-ton standard merchant ships to be launched at the rate of twelve ships per annum, but the outbreak of war with Japan, and the consequent unprecedented volume of ship repair work which followed, rendered this impracticable.

It was finally decided to construct 13 "A" class 9,000-ton standard merchant ships, 10 "B" class 6,000-ton freighters, 10 "C" class 4,000-ton freighters, 10 "D" class 2,500-ton freighters, 10 "E" class 550-ton freighters, 32 300-ton wooden merchant ships, 3 "A" type ocean-going tugs, 3 "B" type harbour tugs, and a 1,000-ton steel floating dock.

At 30th June, 1946 the following portion of this programme had been completed—twelve "A" class vessels were finished and in service, and early completion of the thirteenth was expected; the frame of the first of the "B" class vessels was half finished, and prefabrication of the second was well advanced; design work of the "C" class ships was still in progress; three "D" class freighters had been put into service, three were within a month of launching, and work was going forward on two; more hull construction of "E" class ships was proceeding; two 300-ton wooden cargo vessels had been partly completed; and early handing over of the 1,000-ton floating dock was anticipated. The tug programme has been cancelled.

(iii) *Ship Repair Facilities*. This important phase of activity in the shipyards of the Commonwealth is well provided for in the following dry docks, which are capable of taking large merchant ships:—Cockatoo Docks, Sutherland, Fitzroy, Woolwich and Balmain Dry Docks—all in Sydney; Mort's Dock, Sydney; Newcastle Floating Dock; H.M.A. Naval Dockyard and Alfred Graving Dock, Williamstown; and Duke & Orr's Dry Docks, Melbourne.

From August, 1942 to 15th March, 1946, 12,160 Australian and Allied merchant ships of a total tonnage of 53,079,182 underwent repair and/or maintenance, while 1,869 merchant ships, totalling 6,464,211 tons, were dry-docked or slipped. During the same period an equal volume of Naval and other Service vessels also received attention.

§ 11. Expenditure on Defence.

Details of expenditure on Defence, War (1939–45) Services and Post-war Charges will be found in Chapter XV.—"Public Finance," A.—Commonwealth Finance, § 6, pp. 653–5.

§ 12. War Gratuities.

1. **1914-18 War.**—Reference is made in earlier issues of the Official Year Book (*see* No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the 1914–18 War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury Bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The total amount paid to 30th June, 1948 was £27,515,036 and bonds amounting to £11,790 had not been redeemed at that date.

2. **1939–45 War.**—Briefly, the War Gratuity Act 1945–47 provides for payment to members of the Forces of war gratuity (*a*) at the rate of £3 15s. per month of oversea service, subject to a qualifying period of 90 days continuous or 180 days in the aggregate in twelve months, and of certain subsequent periods in Australia, and (*b*) at the rate of 15s. per month of Australian service after 6th December, 1941, subject to a qualifying period of six months' service, other than that for which payment at the overseas rate is made. All members who perform oversea qualifying service will be paid a minimum of twelve months' gratuity at the oversea rate, irrespective of whether the full twelve months period had been completed or not.

In cases of death due to war service either overseas or in Australia, where members of the family were totally dependent on the deceased member, a minimum payment equivalent to three years' gratuity calculated at the oversea gratuity rate may be made. In respect of all other cases of death, overseas and in Australia, due to war service, gratuity at the rate accruing to the member at the date of notification of his death will be continued for a further seven months.

The period of entitlement to gratuity terminated at the date of discharge or on 30th June, 1947, whichever was the earlier. Payment will be made on 3rd March, 1951, or at earlier dates in certain circumstances, and will include compound interest at the rate of 3.25 per cent. per annum on the yearly credit balances. For greater detail on the provisions of the Act *see* Official Year Book No. 36, pp. 1073–4.

A Registrar of War Gratuities controls the register in which are kept the accounts of all persons entitled to war gratuity. The total liability on account of war gratuity is estimated to be about £80,000,000. Expenditure during the years 1945–46, 1946–47 and 1947–48 was, respectively, £143,285, £2,881,932 and £3,360,402. Provision is made for financing the Act by appropriation from Consolidated Revenue Fund and by borrowing. The War Gratuity Appropriation Act 1948 created a trust account for the payment of gratuities and, from credits of the Import Procurement Suspense, Marine War Risks Insurance, Overseas Shipping and War Damage Fund Trust Accounts, amounts totalling £17,000,000 in all were made available for that purpose during 1948–49. The total expenditure on war gratuities estimated for 1948–49 was £26,000,000.

CHAPTER XXVII.

REPATRIATION.

§ 1. General.

An outline of the activities leading up to the formation of the Commonwealth Repatriation Commission was given in Official Year Book No. 15, p. 931. Some account was given also in the Official Year Book referred to, and in subsequent issues, of the policy and general activities of the Department, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to soldiers and dependants. (*See* Official Year Book No. 17, pp. 598–601.) In 1943 the Australian Soldiers' Repatriation Act was amended by the incorporation of the recommendations of the Parliamentary Committee appointed to inquire into pensions and repatriation benefits. A general increase was made of approximately 20 per cent. in the rates of war pensions and increases were also made in other repatriation benefits.

The main activities of the Repatriation Commission at 30th June, 1947 were confined to the grant, review and assessment of war and service pensions, the provision of medical treatment, payment of re-employment allowances, vocational training of the more seriously disabled members, the renewal and repair of artificial replacements and surgical appliances, the grant and review of sustenance and living allowances, and the administration of the Soldiers' Children Education Scheme.

§ 2. War Pensions.

1. **General.**—Provision for the payment of war pensions to soldiers and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act. Particulars regarding pensions payable under both these Acts as amended are given on page 210 of the Official Year Book No. 34. Owing to limitations of space only some of the main features relating to war pensions under the Australian Soldiers' Repatriation Act 1920–1947 are shown in the following paragraphs :—

(i) *Eligibility for Pension.* There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows :—

- (*a*) A member of the Forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in circumstances which can be regarded as actual combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence happening during the whole period of service.
- (*b*) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (*c*) There is a third ground applicable to all in (*a*) and (*b*) who have had at least six month's camp service. This provides that, where a condition pre-existed enlistment, a pension may accrue if it is considered that such condition was aggravated by service.

(ii) *Ordinary Rates.* Where the daily rate of service pay was not in excess of 19s., the ordinary rate of pension for total incapacity is £5 per fortnight. Where the daily service pay exceeds 19s., the ordinary rate of pension for total incapacity increases to a maximum rate of £6 16s. per fortnight according to the rate of pay. The wife of a totally incapacitated member of the Forces receives £2 4s., and for each child under 16 years of age 18s. per fortnight.

(iii) *Supplementation of Pension.* Where a member in receipt of a pension at the maximum rate is, because of his war disability, temporarily (for at least three months) precluded from earning, an additional pension, not exceeding £2 8s. per fortnight in the case of a married member and 30s. in the case of a single member, may be granted.

(iv) *Women's Nursing and Auxiliary Services.* Members of Women's Services are now entitled to pensions and other benefits as prescribed in the Act. Pension scales are those applicable to male members of the Forces in receipt of similar rates of pay.

(v) *Tuberculosis Cases.* In the case of a member of the Forces who served in a theatre of war, and, at any time after discharge became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable, and medical treatment is provided on application as if the incapacity or death resulted from an occurrence on service. (*See also* § 3. Service Pensions.)

(vi) *Special Rates.* Those who have been totally blinded as the result of war service and those who are permanently totally incapacitated receive, as from 10th July, 1947, special pensions of £10 2s. per fortnight. In addition, an attendant's allowance of £2 8s. per fortnight is payable to the war-blinded and to certain others who are deemed to be in need of an attendant. The wife and any children receive the same rates as shown in para. (ii).

(vii) *Specific Disabilities.* In cases where the disability is amputation of a limb or total loss of vision in one eye, amounts ranging from 9s. to £5 2s. per fortnight are payable as from 10th July, 1947, in addition to the statutory rate of pension and, in certain double amputation cases, allowances are payable for an attendant.

(viii) *Time Limit for Wives.* The time limit within which women must marry in order to be eligible as wives for pension in respect of the 1939–45 War has been extended from seven years to fifteen years from the date of discharge of the member. The children of any such marriage, whenever born, are also eligible. For the 1914–18 War the time limit for wives, i.e., 30th June, 1938, remains, but in certain cases where a member of the Forces has married since that date an allowance not exceeding £2 4s. per fortnight may be granted to him in respect of his wife, provided, by reason of his war disability, she performs duties essential to his welfare.

(ix) *Rates of Pensions in respect of Death.* (*a*) *Widows.* Where a member, whose daily rate of service pay was not in excess of 27s. 6d., dies as a result of war service, the rate of pension payable to his widow as from 10th July, 1947 is £5 10s. per fortnight. Where the service pay exceeds 27s. 6d., the rate of pension is higher, ranging from £5 19s. to £7 6s. per fortnight.

(*b*) *Children of Member.* The first child (under sixteen years) receives a pension of 35s. and each subsequent child 25s. per fortnight. From 2nd October, 1947 a domestic allowance of 15s. per fortnight is paid in the case of a widow and child, or widow and 2 children, to bring the incomes of such families into better proportion with those of widows and 3 or more children. In the case of children both of whose parents are dead, the rates payable are—each child up to 14 years of age, 35s. and each child over 14 years and up to 16 years of age, 40s. per fortnight. An additional amount of 12s. may be paid to double orphans, but certain conditions apply, including a means test.

(x) *Widowed Mother on Death of Member.* A pension varying from £2 10s. to £6 16s. per fortnight, according to the rate of pay of the member, may be granted to a widowed mother, provided widowhood occurred either prior to or within three years after the death of the member.

2. **Appeal Tribunals.**—The principal Act was amended as from 1st June, 1929 to create tribunals to hear appeals in regard to war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatriation Commission that an inacapacity or the death of an ex-member did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of an incapacity of an ex-member of the Forces which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the Tribunals to hear appeals by certain members for service pensions.

3. **Summary of War Pensions, 1946–47.**—At 30th June, 1947 the number of war pensions for the 1914–18 War was 161,959 and for the 1939–45 War 232,678, and the amount paid £8,309,448 and £6,746,192 respectively. The outstanding features for 1946–47 for each war were as follows :—

WAR PENSIONS : SUMMARY, AUSTRALIA, 1946–47.

Particulars.	1914–18 War.	1939–45 War.	Both Wars.
New claims granted	811	51,019	51,830
Restorations..	294	380	674
Claims rejected (gross)	572	31,266	31,838
Pensions reviewed	13,157	51,258	64,415
Pensions cancelled or discontinued	5,619	6,921	12,540
Deaths of pensioners	3,284	892	4,176
Number of pensions in force at 30th June, 1947 ..	161,959	232,678	394,637
Annual pension liability at 30th June, 1947 £	8,163,025	6,841,567	15,004,592
Amount paid in pensions during the year 1946–47 £	8,309,448	6,746,192	15,055,640

4. **Classes of War Pensions, 1946–47.**—At 30th June, 1947 special rate pensions of £9 12s. per fortnight (increased to £10 2s. as from 10th July, 1947) were being paid to the following classes of members of the Forces :—

WAR PENSIONS : MEMBERS ON SPECIAL RATES, 30th JUNE, 1947.

Class.	1914–18 War.	1939–45 War.	Both Wars.
Blinded members	161	117	278
Tubercular members	1,092	1,393	2,485
Totally and permanently incapacitated members	2,763	522	3,285

The following is an analysis of the total number of new claims granted during 1946–47 :—

WAR PENSIONS : NEW CLAIMS GRANTED, 1946–47.

Class.	1914–18 War.	1939–45 War.	Both Wars.
Members	232	17,113	17,345
Wives of members (or husbands of members) ..	230	12,740	12,970
Children	227	19,486	19,713
Other dependants	122	1,680	1,802
Total	811	51,019	51,830

In the following table the number receiving pensions at 30th June, 1947 is shown for each war for each class of pensioner :—

WAR PENSIONS IN FORCE, 30th JUNE, 1947.

Class.	Number of Pensioners.		
	1914–18 War.	1939–45 War.	Both Wars.
Orphan children	1,430	11,662	13,092
War widows	11,944	8,890	20,834
Members	68,375	83,995	152,370
Children	17,795	67,457	85,252
Wives (or husbands)	54,891	54,249	109,140
Parents	7,185	6,187	13,372
Brothers and sisters	132	174	306
Others	207	64	271
Total	161,959	232,678	394,637

5. **Number of War Pensioners and Expenditure, 1946–47.**—The following table shows the number of pensioners for each war at 30th June, 1947, and the places where payments were made during 1946–47 :—

WAR PENSIONS : NUMBER OF PENSIONERS AND EXPENDITURE, 1946–47.

Where Paid.	Number of War Pensioners.				Expenditure.
	Incapacitated Members of the Forces.	Dependants of Deceased Members.	Dependants of Incapacitated Members.	Total.	
1914–18 War.					
					£
New South Wales ..	22,983	6,707	24,338	54,028	3,123,808
Victoria	22,749	5,917	24,530	53,196	2,449,779
Queensland	7,684	1,801	8,372	17,857	865,503
South Australia	4,239	1,602	4,495	10,336	582,845
Western Australia ..	6,043	1,668	6,579	14,290	606,921
Tasmania	3,034	770	3,720	7,524	467,293
Total, Australia ..	66,732	18,465	72,034	157,231	8,096,149
United Kingdom ..	1,361	1,187	1,564	4,112	190,261
Union of South Africa ..	282	107	227	616	23,038
New Zealand					
Other Overseas					
Total	68,375	19,759	73,825	161,959	8,309,448
1939–45 War.					
					£
New South Wales ..	36,165	10,148	51,418	97,731	2,539,721
Victoria	16,962	7,250	23,571	47,783	1,631,545
Queensland	9,814	3,086	14,244	27,144	750,909
South Australia	8,496	2,163	12,580	23,239	660,221
Western Australia ..	9,618	2,645	15,574	27,837	821,032
Tasmania	2,708	818	4,519	8,045	258,923
Total, Australia ..	83,763	26,110	121,906	231,779	6,662,351
United Kingdom ..	127	317	184	628	79,109
Union of South Africa ..	105	51	115	271	4,732
New Zealand					
Other Overseas					
Total	83,995	26,478	122,205	232,678	6,746,192

6. **Summary of War Pensions, 1930–31, and 1938 39 to 1946–47.**—The following table shows, for each war, the numbers of pensions granted, claims rejected, pensions in force, and the amount paid in pensions in each of the years ended 30th June, 1941 to 1947, and the total war pensions for each of the years ended 30th June, 1931 and 1939 to 1947 :—

WAR PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	War Pensions in Force.				Amount paid in Pensions.
			Incapacitated Members of the Forces.	Dependants of Deceased Members.	Dependants of Incapacitated Members.	Total.	
			1914–18 WAR.				
							£
1941 ..	1,322	2,419	75,450	25,146	123,393	223,989	7,469,759
1942 ..	785	1,720	74,307	23,847	112,902	211,056	7,294,587
1943 ..	1,419	1,056	73,387	22,988	103,801	200,176	7,707,612
1944 ..	1,201	1,111	72,232	22,114	95,108	189,454	8,618,138
1945 ..	681	954	70,980	21,175	87,048	179,203	8,633,589
1946 ..	650	552	69,640	20,381	79,964	169,985	8,354,809
1947 ..	811	572	68,375	19,759	73,825	161,959	8,309,448
			1939–45 WAR.				
							£
1941 ..	1,529	2,774	317	791	394	1,502	18,722
1942 ..	8,122	7,728	2,334	3,832	3,117	9,283	207,324
1943 ..	18,352	16,281	7,853	8,345	10,479	26,677	659,384
1944 ..	30,348	34,505	18,126	13,043	23,839	55,008	1,730,471
1945 ..	50,649	41,619	35,766	16,650	49,460	101,876	2,763,796
1946 ..	92,986	66,766	68,097	25,479	95,829	189,405	4,903,409
1947 ..	51,019	31,266	83,995	26,478	122,205	232,678	6,746,192
			BOTH WARS.				
							£
1931 ..	11,555	920	75,316	35,617	172,389	283,322	7,996,180
1939 ..	6,794	7,541	77,151	27,571	144,571	249,293	7,819,289
1940 ..	2,469	4,846	76,462	26,388	134,027	236,877	7,682,246
1941 ..	2,851	5,193	75,767	25,937	123,787	225,491	7,488,531
1942 ..	8,907	9,448	76,641	27,679	116,019	220,339	7,501,911
1943 ..	19,771	17,337	81,240	31,333	114,280	226,853	8,366,996
1944 ..	31,555	35,616	90,358	35,157	118,947	244,462	10,348,609
1945 ..	51,330	42,573	106,746	37,825	136,508	281,079	11,397,385
1946 .	93,636	67,318	137,737	45,860	175,793	359,390	13,258,217
1947 ..	51,830	31,838	152,370	46,237	196,030	394,637	15,055,640

§ 3. Service Pensions.

1. **General.**—The payment of service pensions was provided for in the Australian Soldiers' Repatriation Act 1935, and the scheme has operated since 1st January, 1936.

Originally fixed on a lower scale, the rate of service pension for a member of the Forces now conforms to the rate of the age or invalid pension which from 10th July, 1947 was £3 15s. per fortnight. The maximum rate for the wife of a member is 44s. per fortnight, whilst 10s. per fortnight is payable for the eldest child under 16 years of age and 5s. per fortnight for each of the younger children up to three in number. The actual rate payable in any case is determined after taking into consideration all other income received and property (apart from the home and certain other exempted items) owned by the pensioner, and no service pension can be paid where such other income and/or property exceeds certain specified limits. From July, 1947 the "allowed income" is £149 10s. per annum for a single man and £299 per annum in the case of a member and eligible wife. If a member has property exceeding in value £650 (£1,300 for a member and eligible wife) that alone precludes payment of a pension. Pension is assessed according to the amount of income ; if the income from all sources is less than the amount shown above, service pension is assessed at such rate as will, with that other income, bring the total income of the pensioner (including service pension) up to the "allowed income", provided that the pension cannot exceed the maximum rate specified for the particular class of case. If assessable property is held, then a deduction is made from the pension assessed according to income only, the deductions being made at so much for each complete £10 of property in excess of £50 (or £100 in the case of member and eligible wife). The deductions are as follows:—for each £10 from £50 to £400, 9d. per fortnight; for each £10 of the portion from £400 to £650, 1s. 6d. per fortnight.

Female members of the forces were made eligible in 1936 for consideration of service pensions if they embarked for service abroad; previously they must have served in a theatre of war. In the same year an institutional rate of service pension not exceeding 12s. per fortnight was made available. This pension rate from 10th July, 1947 was 26s. per fortnight, and benefits, particularly, inmates of mental asylums, who were previously excluded from the scheme.

Eligibility for service pensions may be established on the following grounds:—

(*a*) Sixty years of age or more, provided the member served in a theatre of war, but eligibility on this ground applies only to the member and not to his wife or children. In the case of a female member of the forces, the qualifying age is 55 years, and service abroad, not necessarily in a theatre of war, is sufficient.

(*b*) Permanently unemployable, provided the member served in a theatre of war (or, in the case of a female member, served abroad). Under this class pensions may be paid to the member, his wife and children—up to four in number.

(*c*) Pulmonary tuberculosis, whether the member served in a theatre of war or not. Under this class, also, pensions are payable to the wife and children—up to four in number.

Only those members who qualify under Class (*c*) are entitled to receive both service and invalid pensions at the same time.

The eligibility of wives and children for service pension is as follows:—

1914–18 War: wife married, or child born, before 2nd October, 1931.

1939–45 War: wife married within 15 years after discharge of member; any child born of such a marriage.

During the year 1941–42 the scheme was extended to veterans of the South African War 1899–1902, and by amending legislation in 1943 was further extended to members of the Forces of the 1939–45 War.

2. **Operations, 1946–47.**—The following are the important details of the service pension scheme during 1946–47:—

Claims granted during year—	
Members of the Forces	2,030
Wives	563
Children	94
Total	2,687
Claims rejected during year—	
Members of the Forces	643
Wives	290
Children	191
Total	1,124
Service pensions cancelled or discontinued during year	1,103
Deaths of pensioners during year	677
Pensions in force at 30th June, 1947	14,475
Annual pension liability on 30th June, 1947	£997,184
Amount paid in pensions during the year 1946–47	£904,120

3. **Number of Service Pensioners and Expenditure, 1937–38 to 1946–47.**—The following table shows the number of service pensions in force and the expenditure for the ten years 1938 to 1947 :—

SERVICE PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Number of Service Pensions in Force—						Amount Paid in Pension. (a)
	Old-age-Members of Forces.	Permanently Unemployable.		Suffering from Pulmonary Tuberculosis.		Total.	
		Members of Forces.	Dependants.	Members of Forces.	Dependants.		
							£
1938 ..	2,805	2,712	3,918	544	872	10,851	329,871
1939 ..	3,397	3,393	4,667	619	1,032	13,108	407,127
1940 ..	3,858	3,706	4,814	623	999	14,000	472,263
1941 ..	4,008	3,705	4,734	655	979	14,081	511,103
1942 ..	4,294	3,772	4,591	650	939	14,246	579,656
1943 ..	4,270	3,695	4,221	452	646	13,284	660,109
1944 ..	4,235	3,628	4,025	290	406	12,584	652,534
1945 ..	4,437	3,702	3,807	258	362	12,566	648,996
1946 ..	4,971	3,896	3,633	244	345	13,089	804,880
1947 ..	5,894	4,312	3,657	254	358	14,475	904,120

(a) Includes amounts in respect of 1939–45 War as follows :—1942–43, £2,314 ; 1943–44, £6,403 ; 1944–45, £7,528 ; 1945–46, £11,372 ; and 1946–47, £15,786.

§ 4. Medical Treatment of Returned Soldiers Suffering from War Service Disabilities.

At 30th June, 1947 there were 5,933 in-patients, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth Departments. There were 278,057 out-patient attendances for treatment during the year, excluding treatments by the 1,884 local medical officers resident in metropolitan and country areas and New Guinea. The expenditure to 30th June, 1947 was £17,109,530.

§ 5. General Benefits and Miscellaneous.

1. **Other Departmental Activities.**—(i) *General.* Since the outbreak of the 1939–45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants have continued without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants in lieu of pension.

By amending legislation passed during the 1939–45 War, these benefits were extended for members engaged in that war, and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are :—payments of re-employment allowance while awaiting employment ; provision of tools of trade and equipment where they are necessary to the member's employment ; transportation expenses to meet the cost of fares and removal of household belongings, where a member, or member and family, take up employment, a business, or settle on the land; supplementation of wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable members and widows to establish themselves in businesses, practices or other occupations, including (until the Commonwealth Director of War Service Land Settlement began operations early in 1946) agricultural occupations; gifts up to £75 for furniture to married members who are blinded or totally and permanently incapacitated, also to widows with children; free passages to Australia for wives, widows and children of members who married abroad (and passages outward from Australia in certain cases of members and dependants).

In the Commonwealth Reconstruction Training Scheme, the Commission's part is the re-establishment of the more seriously disabled where ordinary training is not sufficient, and special means have to be found to overcome each problem. Prior to the inauguration (in 1945) of the full scheme, however, the Commission conducted a tentative scheme to train members who were unable, through war disablement, to return to their pre-war occupations. Up to the time the larger scheme took over those still in training, the Commission had dealt with some 430 cases.

(ii) *Review of General Benefits.* The following paragraph gives particulars (number of cases and expenditure) of the more important general benefits over the period from 8th April, 1918 to 30th June, 1947.

(*a*) *Employment*—

1914–18 *War:* Number of applications, 251,200; Expenditure—sustenance while awaiting employment, £1,768,000; tools of trade and fares, etc. (gift), £554,000; tools of trade (loan), £21,800.

1939–45 *War:* The placing of members in employment was carried out by the Commission for only a short period prior to the inauguration of the Department of Labour and National Service, but the Commission has the responsibility of payment of re-employment allowance, provision of tools of trade and payment of fares and removal expenses. Number of cases and expenditure to 30th June, 1947 are as follows:—Re-employment allowances—64,755, £504,236; tools of trade (gift)—161,949, £1,179,391; (loan)—6,630, £107,059; fares and removal expenses, —9,597, £137,333.

(*b*) *Vocational Training*—

1914–18 *War:* Number of members completed training in full-time courses, 27,696; expenditure, £4,849,600.

1939–45 *War:* Members completing apprenticeships,—11,686, £1,547,095.

(*c*) *Business Loans*—

1914–18 *War:* 6,130, £421,800.

1939–45 *War:* 14,161, £2,749,565. Allowances pending productivity of business—720, £43,874. Fares and removal expenses to member proceeding to a business, £414.

(*d*) *Furniture Grants*—

1914–18 *War:* Expenditure—gift (to members blinded or totally and permanently incapacitated and to widows), £75,190; loan (to other classes of members), £1,031,570; total number of cases, 35,400.

1939–45 *War:* Gift (no loan cases)—widows, 3,754, £239,618; members, 58, £2,811.

(*e*) *Free Passages*—

1914–18 *War:* £509,120

1939–45 *War:* To Australia—4,393, £251,997; from Australia—51, £4,490.

(*f*) *Soldiers' Children Education Scheme*—

Main Scheme : Full-time training as from 13 years of age.

Particulars.		1914–18 War.	1939–45 War.
Applications		29,320	3,726
Approved		27,676	3,626
Completed training		21,439	896
Withdrawn during training		3,888	153
Awaiting next stage of training		63	58
In training		2,286	2,519
Expenditure	£	2,729,937	131,835

Minor benefits prior to entrance to main scheme : 1914–18 War, £37,000 ; 1939–45 War, £3,851.

(iii) *Total Expenditure on General Benefits.* The total expenditure on general benefits, apart from war and service pensions, from 8th April, 1918 to 30th June, 1947, was as follows :—1914–18 War, £27,676,151 (including loan, £1,676,014) ; 1939–45 War, £10,903,566 (including loan, £2,857,344). Of the grand total of £38,579,717, the largest amounts were absorbed by medical treatment with £17,000,000, vocational training with £6,500,000, and expenses of providing employment, £5,000,000.

2. **Expenditure of Repatriation Commission, 1946–47.**—The expenditure of the Commission for the year ended 30th June, 1947 was £25,388,465, distributed as follows :—

Repatriation benefits—		£
Loans to members		1,921,234
Grants to members and general expenditure (including maintenance of training schools, medical institutions, etc.)		5,880,953
Assistance to members in necessitous circumstances		16,364
Allowances to dependants of members not provided for under the Act		386
Total		7,818,937
Soldiers' Children Education Scheme		130,872
War and Service Pensions		16,064,563
Administrative costs—	£	
Salaries	1,138,745	
Contingencies	235,348	
		1,374,093
Grand total		25,388,465

3. **Losses on Soldier Settlement, 1914–18 War.**—Reference to losses incurred in connexion with settlement of returned soldiers and sailors of the 1914–18 War will be found in Chapter IV., "Land Tenure and Settlement."

CHAPTER XXVIII.

MISCELLANEOUS.

§ 1. Patents, Trade Marks and Designs.

1. **Patents.**—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–1946, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Fees totalling £10 are sufficient to obtain letters patent for the Commonwealth of Australia and the Territories of Papua, New Guinea and Norfolk Island. Renewal fees are payable as follows :—£1 before the expiration of the fifth year and an amount progressively increasing by ten shillings before the expiration of each subsequent year up to the fifteenth, when the fee becomes £6. If a renewal fee is not paid when it becomes due, an extension of time up to twelve months may be granted on grounds specified in the Act, and subject to the payment of prescribed fees. An amendment to the Act in September, 1946 permits the public to inspect an application, complete specification and provisional specification (if any) after the complete specification has been lodged. Previously specifications were made public only after an application had been accepted, in many cases as much as a year after the date of lodgment.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1939 and 1944 to 1947 is given in the following table, which also shows the number of letters patent sealed in each year :—

PATENTS : AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.
No. of applications	5,740	5,860	7,349	9,072	8,358
No. of applications accompanied by provisional specifications	3,161	2,548	3,600	4,321	3,727
Letters patent sealed during each year ..	3,141	1,243	1,248	1,901	2,773

(iii) *Revenue.* The revenue of the Commonwealth Patent Office during the years 1939 and 1944 to 1947 is shown hereunder :—

PATENTS : REVENUE, AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.
	£	£	£	£	£
Fees collected under Patents Act ..	45,581	56,482	65,479	83,871	90,278
Receipts from publications ..	1,828	1,351	1,668	2,293	2,100
Total	47,409	57,833	67,147	86,164	92,378

2. **Trade Marks and Designs.**—(i) *Trade Marks.* Under the Trade Marks Act 1905 the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1936. Special provisions for the registration of a "Commonwealth Trade Mark" are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910 and the Designs Acts 1912, 1932, 1933 and 1934, is now cited as the Designs Act 1906–1934. Under this Act a Commonwealth Designs Office has been established and the Commissioner of Patents appointed "Registrar of Designs".

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered during the years 1939 and 1944 to 1947 :—

TRADE MARKS AND DESIGNS : AUSTRALIA.

Applications.	1939.	1944.	1945.	1946.	1947.
RECEIVED.					
Trade Marks	1,992	1,935	2,792	4,142	4,041
Designs	865	458	981	1,544	1,256
REGISTERED.					
Trade Marks	1,580	669	1,003	1,649	2,447
Designs	736	224	668	771	879

(iv) *Revenue.* The revenue of the Trade Marks and Designs Office during the years 1939 and 1944 to 1947 is shown hereunder :—

TRADE MARKS AND DESIGNS : REVENUE, AUSTRALIA.

Particulars.	1939.			1944.			1945.			1946.			1947.		
	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Fees collected under Commonwealth Acts ..	15,951	1082	19	4,519	987	8	14,644	1509	12	19,245	2220	15	26,913	1552	10

No fees in respect of Trade Marks have been collected under State Acts since 1922.

§ 2. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act 1912–1935 wherein, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the revenue obtained for the years 1939 and 1944 to 1947 :—

COPYRIGHT : AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.
Applications received—					
Literary	1,438	1,479	1,469	1,613	1,571
Artistic	53	34	86	66	63
International	3	..	..	..	..
Applications registered—					
Literary	1,359	1,162	1,448	1,291	1,674
Artistic	38	23	53	69	66
International ..	1	..	..	..	..
Revenue .. .. £	411	395	377	438	432

§ 3. Local Option and Reduction of Licences.

For information on local option concerning the sale of fermented and spirituous liquors and the reduction of licences *see* previous issues of the Official Year Book. Issue No. 22 (pp. 1005–8) contains details, by States, of polls taken and of the operations of the Licences Reduction Boards.

§ 4. Lord Howe Island.

Lord Howe Island is situated in latitude 31° 30′ south, longitude 159° 5′ east, about 436 miles north-east of Sydney, and has an area of 3,220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formations of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of Kentia Palm Seed. The land belongs to the Crown and is occupied rent-free on sufferance

Discovered in 1788, the Island was first settled by a small party of Maoris in 1853 ; afterwards a colony was settled from Sydney. Constitutionally the Island is a dependency of New South Wales and is included in King, one of the electorates of Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 179 at the Census of 30th June, 1947.

§ 5. Commonwealth Council for Scientific and Industrial Research.

1. **General.**—By the Science and Industry Research Act 1926, the previously existing Commonwealth Institute of Science and Industry was reorganized under the title of the Council for Scientific and Industrial Research.* An account of the organization and work of the former Institute was given in earlier issues of the Official Year Book. (*See* No. 14, p. 1061).

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* Under the Science and Industry Research Act 1949 the Commonwealth Scientific and Industrial Research Organization was established, effective from 19th May, 1949.

2. **Science and Industry Research Act 1920–1945.**—This Act provides for a Council, consisting of—

(*a*) Five members nominated by the Commonwealth Government;
(*b*) the Chairman and Vice-Chairman of each State Committee constituted under the Act; and
(*c*) such other members as the Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The Commonwealth nominees form an Executive Committee which may exercise, between meetings of the Council, all the powers and functions of the Council, of which the principal are as follows:—(*a*) To initiate and carry out scientific researches in connexion with primary or secondary industries in Australia; (*b*) to train research workers and to establish industrial research studentships and fellowships; (*c*) to make grants in aid of pure scientific research; (*d*) to establish industrial research associations in any industries; (*e*) to test and standardize scientific apparatus and instruments; (*f*) to establish a Bureau of Information; and (*g*) to act as a means of liaison between Australia and other countries in matters of scientific research.

3. **Science and Industry Endowment Act 1926.**—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance (*a*) to persons engaged in scientific research; and (*b*) in the training of students in scientific research. Provision is made for gifts or bequests to be made to the fund, which is controlled by a trust consisting of the Commonwealth nominees on the Council. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Council.**—The activities of the Council for Scientific and Industrial Research have necessitated a widespread and adaptable organization. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, a State Committee, widely representative of scientific and industrial interest, has been established in each of the six States. These Committees advise the Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the C.S.I.R. was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which can often employ their own scientific staffs, the farmer and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. However, in 1937, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and the Council proceeded to establish several laboratories for work in that field; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would to a large extent have been impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

For the purpose of carrying out its research work the Council has established a number of Divisions and Sections. The Divisions, of which there are now fifteen, comprise the major establishments for which special laboratory buildings have been erected and equipped; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations are concerned, to justify their designation as Divisions. As the Council's investigations extend on a Commonwealth-wide basis and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations have been established in various parts of Australia.

The Divisions which have been established are as follows :—

(1) Plant Industry, with main laboratories at Canberra and field stations.
(2) Economic Entomology, with main laboratories at Canberra and field stations.
(3) Animal Health and Production, with main laboratories in Melbourne and Sydney and field stations.
(4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
(5) Soils, with main laboratories at Adelaide and extensive operations in the field.
(6) Forest Products, with main laboratories in Melbourne and field experiments.
(7) Food Preservation and Transport, with main laboratories at Homebush, New South Wales, and a subsidiary laboratory in Brisbane.
(8) Fisheries, with main laboratories at Cronulla, New South Wales, and experimental work in coastal waters of Australia.
(9), (10), (11) Metrology, Physics and Electrotechnology comprising the National Standards Laboratory at Sydney.
(12) Radiophysics, with main laboratory at Sydney.
(13) Aeronautics, with laboratories in Melbourne.
(14) Industrial Chemistry, with laboratories in Melbourne.
(15) Tribophysics, with laboratories in Melbourne.

The following are the Sections :—

(1) Research Station, Murray Irrigation Area, Merbein, Victoria.
(2) Irrigation Research Station, Griffith, New South Wales.
(3) Radio Research Board, Sydney.
(4) Dairy Products, Melbourne.
(5) Mineragraphic Investigations, Melbourne.
(6) Ore-dressing Investigations, Melbourne and Kalgoorlie.
(7) Building Research, Melbourne.
(8) Flax Research, Melbourne.
(9) Nuclear Physics, Melbourne.
(10) Physical Metallurgy, Melbourne.
(11) Meteorological Physics, Melbourne.
(12) Wool Textile Research, Geelong.
(13) Coal Survey, Sydney.

In addition to its investigational work, the Council maintains an Information Service which deals with inquiries covering a wide range of scientific and technical subjects. Since the outbreak of war the Council has established Scientific Research Liaison Offices in London and Washington. There is also a Section of Mathematical Statistics, with head-quarters at the University of Adelaide; the main functions of this Section are (*a*) to provide the various Divisions and Sections of the Council with advice as to the proper planning of experimental work so as to obtain results which are of the highest degree of accuracy, (*b*) to assist the Divisions and Sections in the analysis of experimental data and (*c*) to carry out research in statistical theory and its application to practical problems.

The Council's Head Office, with administrative and executive staff and central library, is in Melbourne. The funds for the Council are provided from two main sources, viz., from Commonwealth revenue by Parliamentary appropriation and from industry directly or indirectly by way of contributions and special grants. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that C.S.I.R. has succeeded in a very large measure in gaining the confidence of the public

The activities of C.S.I.R. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present in a concise form an adequate picture of them. For details of the investigations in progress reference should be made to the Annual Reports of the Council.

§ 6. Australian Institute of Anatomy.

1. **Foundation of Institute.**—The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian Nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a Museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health.

2. **Additions to Original Collection.**—In addition to the original collection, which has been greatly augmented, the following gifts have been made to the Australian Nation, and are on view in the Institute :—

(1) *Horne-Bowie Collection.*—Dealing with the life of Central Australian aborigines and throwing valuable light on the psychology of this Stone Age people.

(2) *Burrell Collection.*—This deals with the life history of the platypus, and is unique in the world. The platypus is the most primitive mammal known to science, and is the link between the bird, the reptile and the mammal.

(3) *Milne Collection.*—This is an anthropological and ethnological collection dealing with the aborigines of New South Wales, and contains many valuable and now unobtainable native weapons and implements.

(4) *Murray Black Collection* of anatomical material representative of the aborigines of Southern Victoria and the River Murray.

(5) *Nankivell Collection*, illustrating the anatomy of the aborigines of the Murray Valley.

(6) *Harvard University Collection.*—This includes a collection of specimens from the Harvard University, U.S.A., representing a carefully worked out epitome of archaeology of the United States of America, and, together with two rare skeletons of primitive North American Indians, was a goodwill gift from the University to the Institute of Anatomy.

(7) *The Sir Hubert Murray Collection.*—The ethnological and osteological collection of the late Sir Hubert Murray, formerly Lieutenant-Governor of Papua. This deals especially with the anthropology of Papua.

(8) *The Rabaul Ethnological Collection.*—This concerns chiefly the ethnology of the Mandated Territory of New Guinea.

(9) *The Basedow Collection.*—This collection has been recently purchased by the Commonwealth Government. It deals especially with the anthropology of Central and Northern Australia and was assembled, after many years of research, by the late Dr. Herbert Basedow of Adelaide, who was formerly Protector of Aborigines.

(10) *The Crowther Collection* of stone artifacts of the extinct Tasmanian race. This collection was a gift of Dr. W. E. L. H. Crowther of Tasmania.

(11) *Keith Goddard Australian Ethnological Collection.*—This collection has been donated by Mr. R. H. Goddard of Sydney and represents an important ethnological collection dealing with the aborigines of the Northern Territory. It includes also some specimens from the Pacific Islands.

(12) Many hundreds of specimens and books received from numerous interested scientists, the most outstanding being those from Mr. E. Hill, of Nagambie, Victoria ; Mrs. Harry Burrell, New South Wales ; and medical books for the Library from the estates of the late Drs. Molloy, David Grant and Robert Stirling.

3. **Endowments for Orations and Lectures.**—In addition to the aforementioned donations of material, there have been several endowments for Orations and Lectures as follows :—

(1) *The Anne MacKenzie Fund.*—Founded with a gift of £1,000 by the late Sir Colin MacKenzie in memory of his mother. The interest from the fund to be used to arrange for an oration or symposium to be delivered or held from time to time as circumstances warrant. The purpose of the lecture or symposium is to emphasize the importance of the prevention of disease.

(2) *The Kendall Lecture in Veterinary Science.*—Endowed by the sons of the late Dr. W. T. Kendall who was the founder of the first Veterinary School in the Southern Hemisphere.

(3) *The Charles Mackay Fund.*—Endowed by Miss C. Mackenzie with a gift of £607 as a memorial to her grandfather, an educationalist, who arrived in Melbourne in 1852 and died at Kilmore, Victoria. The purpose of the fund is to arrange a lecture or symposium known as the Charles Mackay Lecture or Symposium to be held from time to time as circumstances warrant. The lecture or symposium is to deal with the history of medical science.

4. **The Scope of the Institute.**—The building occupies a site which adjoins that reserved for the Australian National University.

The Institute consists of two separate and distinct entities. Portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie is arranged in two large museums which are open to the general public. The material in these museums has been arranged so as to present simple lessons in human hygiene as well as to display the anatomical features and especially the peculiarities of Australian fauna.

The remainder of the building houses research units which are studying problems in the biological and medical sciences. The large collections of bony anatomical material donated by Murray Black have provided most interesting and valuable data on aboriginal diseases.

In 1938, following upon the retirement due to ill-health of Sir Colin MacKenzie, the activities of the Institute were extended to interpret more fully the ideas of the founder. In the later years of his life Sir Colin had been keenly interested in the relationship of nutrition to the development of the child. When a section for the study of child growth and development was established by the Commonwealth Department of Health in 1938, the head-quarters were transferred to the Institute.

The section devoted to the study of nutrition has been considerably enlarged and many important problems relating to nutrition of the Australian people have been studied.

§ 7. The Commonwealth Observatory.

1. **Foundation of Observatory.**—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in Official Year Book No. 19, p. 979.

2. **Site of Observatory.**—The Observatory is situated on Mount Stromlo which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is, about 700 feet above the general level of the surrounding country.

3. **Equipment.**—Some of the major items of astrophysical equipment have been obtained through the generosity of private donors. Thus a 30-inch reflector was donated by J. H. Reynolds, Esq.; a 9-inch refractor was presented by the late Mr. James Oddie; and the trustees of the late Lord Farnham made available a 6-inch refractor. Other major equipment comprises a solar tower telescope with an 18-inch coelostat and a 3-inch reversible transit instrument. The Observatory was the successful tenderer at a public sale for the purchase from the Victorian Government of the long disused 48-inch reflector of the now closed Melbourne Observatory. It is proposed to modernize this instrument so as to adapt it to the general astronomical programme of the observatory. A 74-inch reflector is being purchased.

4. **Functions of Observatory.**—In addition to covering the type of astrophysical research for which the Observatory was founded, the field of work has been extended to include experimental and theoretical investigations of the ionosphere, and the determination of time. The observatory is now responsible for the accuracy of the Australian Time Service, and considerable attention is being given to the development of this work. Investigations in the fields of double star astronomy, stellar spectroscopy, variable stars, terrestrial magnetism and cosmic rays are also being carried out.

§ 8. Standards Association of Australia.

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice.

The Association was established in July, 1929 by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State Governments and industry.

The sole executive authority of the Association is vested in the Council on which industry is fully represented, together with official representatives of the Commonwealth and State Governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by more than 4,500 individuals who are experts in their particular fields and are organized into more than 500 committees. These committees are grouped under an internationally established classification, covering civil engineering and building construction, mechanical engineering, electrical engineering, automotive industry, transportation, naval architecture and marine engineering, shipbuilding, ferrous metallurgy, non-ferrous metallurgy, chemical industry, textile industry, mining, agriculture, wood industry, pulp and paper industry, glass and pottery, household and domestic economy, miscellaneous and general.

These committees are comprised of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry, according to the foregoing classification, within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality and dimension and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries were answered during the last year.

The Association has international affiliations and the standards of all British and foreign countries are filed in the library and are accessible to members. It also administers the Australian National Committees of the International Electrotechnical Commission, the World Power Conference and the International Commission on Large Dams. The Association is also a member, representing Australia, of the International Organization for Standardization (ISO) and is an elected member of the ISO Council for the years 1947–1950 inclusive.

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from head-quarters and branch offices in the various States. British Air Ministry (D.T.D.) specifications are also on sale.

The head-quarters of the Association are at Science House, Gloucester-street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins-street, Melbourne; Empire Chambers, cr. Queen and Wharf-streets, Brisbane; Alliance Building, Grenfell-street, Adelaide; Gledden Building, Hay-street, Perth; Premier's Department, Murray-street, Hobart; Department of the Interior, Canberra; and Howard Smith Chambers, Watt-street, Newcastle.

§ 9. Film Censorship.

1. **Legislation.**—The censorship of imported films derives its authority from Section 52 (*g*) of the Customs Act, which gives power to prohibit the importation of goods. Under this section, regulations have been issued prohibiting the importation of films except under certain conditions and with the consent of the Minister. The regulations provide, *inter alia*, that no film shall be registered which in the opinion of the Censor is (*a*) blasphemous, indecent or obscene; (*b*) likely to be injurious to morality, or to encourage or incite to crime; (*c*) likely to be offensive to the people of any friendly nation; (*d*) likely to be offensive to the people of the British Empire; or (*e*) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar, with the addition that no film may be exported which in the opinion of the Censorship is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the head-quarters being in Sydney. There is also a right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. Such control does not, however, extend to locally-produced publicity.

2. **Import of Films.**—Imported standard size (35 millimetre) films dealt with by the Censorship for the year 1947 were as follows :—2,131 films of 4,076,716 feet passed without eliminations, 50 films of 299,226 feet passed after eliminations, and 4 films of 29, 726 feet rejected in the first instance, making a total of 2,185 films of 4,405,668 feet (one copy). The countries of origin were as follows :—United States of America, 888 films of 2,975,723 feet; United Kingdom, 816 films of 1,050,452 feet; and 481 films of 379,493 feet from other countries.

There were also imported during 1947 3,164 miniature films (16 millimetres) of 2,069,247 feet and 295 miniature films (9.5 and 8 millimetres) of 89,613 feet.

3. **Export of Films.**—The number of films exported for the year 1947 was 929 of 1,311,094 feet, of which 694 films of 1,132,357 feet were sent to places in the British Empire including Mandated Territories.

§ 10. Australian National Film Board.

1. **Constitution and Functions.**—The Australian National Film Board was inaugurated in April, 1945. Its duties as set out in the Cabinet Agendum authorizing its formation are " to expand, promote, assist and co-ordinate the production and distribution and the importation of films for purposes of school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion and immigration."

The Board's constitution and functions were based on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including the Directors of Education, called in November, 1944 by the Ministers for Information and Post-war Reconstruction.

The Board consists of seven members appointed by the Commonwealth Government, one on the nomination of the Education Departments of the States. It is attached, for administrative purposes, to the Department of Information, through which Department and the Commonwealth National Library it carries out its functions.

The Department of Information produces, or supervises the production by commerical enterprises of, all films authorized by the Board and arranges for their theatrical distribution generally and their non-theatrical distribution outside Australia.

The Commonwealth National Library arranges for the acquisition of films other than Board productions, and has control of their non-theatrical distribution within Australia. There is an Advisory Committee to the Board in each of the States which acts as the agent of the Library in the non-theatrical distribution of films.

2. **Organization and Production.**—The film-making section of the Department of Information is a well-equipped organization with a staff of approximately 75 persons. Its nucleus was the Cinema and Photographic Branch of the Department of Commerce and Agriculture, which had been making publicity films for the Commonwealth Government for nearly twenty years before the war, and the Official War Photographers' unit of the Department of Information, which had its films processed by the trade in Sydney. The Cinema and Photographic Branch carried out its film-making activities in Bright-street, Melbourne. Unfortunately, its premises, together with the greater part of its equipment, were destroyed by fire in March, 1946.

For the next two years the Film Division worked under extreme difficulties. The Commonwealth Government plans eventually to build a film centre at Canberra, but housing and other urgent building requirements will probably delay a start being made on the venture for five or seven years. Temporary premises to house the various sections of the Film Division could not be found. A small laboratory was improvised in Melbourne to process 16mm. films, but the major activities of the Division were carried out in various trade establishments in Sydney. Recently, however, the Division entered into possession of a studio at Burwood, Sydney, which had been converted from a school hall lent for the purpose by the Education Department of New South Wales, at a cost of approximately £20,000. This studio has excellent editing, cutting and sound recording facilities, but processing of all 35mm. film has still to be carried out by the trade in Sydney.

The Film Division makes, on an average, about 35 films a year (most of them single reelers, although two 4-reel and several 2-reel productions have been completed) as well as a number of national appeal shorts. The single reel films include a monthly film magazine known as the Australian Diary. The programme authorized by the Board includes films required by other Commonwealth Departments for information or publicity purposes.

During the year 1947–48 the Board authorized the production of films worth nearly £75,000, of which films sponsored by other Commonwealth Departments accounted for nearly £20,000.

The Department has a number of film units operating continuously, but also places contracts with commercial organizations.

3. **Distribution.**—Board films are designed primarily for informational and educational purposes, but a good many of them have been accepted for theatrical release in Australia and New Zealand. Some are being released theatrically in the United Kingdom and Malaya, while others are being televised in the United States of America. All of them are being shown non-theatrically in overseas countries where the Commonwealth Government is represented officially. Several Board films have attracted favorable attention from overseas film societies and three have been entered for the Documentary Academy Award in America.

As in the field of production, the Department of Information co-operates closely with the film trade in the field of distribution. It has its representative on the National Films Council which arranges for the theatrical distribution of Government publicity shorts on subjects of national importance.

4. **Non-Theatrical Distribution.**—The Commonwealth National Library has built up a very comprehensive collection of documentary, educational and instructional films and other visual aids from all countries, having acquired them either by purchase, gift or exchange. Together with its agents in the States it has made great progress in the non-theatrical distribution of films.

§ 11. Australian Broadcasting Commission.

1. **General.**—The Australian Broadcasting Commission was established in 1932 to take over control of national broadcasting in Australia from the Australian Broadcasting Company, which had been in existence since 1924. In establishing the Commission the expressed object of the government of the day was to raise the standards of broadcasting in Australia. Control of the Australian Broadcasting Commission was vested in five commissioners, and it derived its finances from a portion of the licence fees paid by persons owning radio sets. This method of control and finance remained practically unchanged until December, 1948, when an Act was passed increasing the number of the commissioners to seven, one of whom was to be an officer of the Treasury and one an officer of the Postmaster-General's Department; the Act also changed the method of finance so that the Australian Broadcasting Commission now receives its income from an annual government grant, which bears no direct relation to the total amount collected in licence fees. The technical services of the Australian Broadcasting Commission are, as laid down in the Act of 1932, still provided by the Postmaster-General's Department.

Broadcasting in Australia is a compromise between the system in operation in Great Britain and that in the United States, and the duty of the Australian Broadcasting Commission is to maintain the standards of radio without either dictating to its listeners or playing down to the lowest tastes. Space does not permit of a complete review of its activities since 1932, but in the following paragraphs are set out a few facts of interest concerning some of its departments.

2. **Music.**—The Australian Broadcasting Commission is to-day the biggest concert-giving organization in the Commonwealth, and the immense growth of interest in music in this country is illustrated by the fact that Australian listeners in increasing numbers now welcome the opportunity of hearing fine music on the air and in the concert hall and have magnificently supported the presentation of orchestral concerts and of recitals by the best musicians from their own country and from overseas. In 1936 small regular orchestras were formed by the Australian Broadcasting Commission in Sydney, Melbourne, Adelaide, Brisbane, Perth and Hobart, and from these foundations have grown our present orchestras. Those in Sydney and Melbourne measure up to first class orchestras overseas, whilst those in the other capital cities are showing rapid improvement and are now the equal of those in many places of comparable size in Europe or America. Until 1946 the financing of these orchestras was the sole responsibility of the Australian Broadcasting Commission, but since then arrangements have been made in Sydney, Brisbane and Hobart for local government and municipal bodies to bear part of their cost. This close co-operation between a broadcasting organization, city authorities and State Governments to establish and maintain symphony orchestras is unique in the world.

The policy of the Australian Broadcasting Commission so far as individual artists are concerned has always been to develop local talent and at the same time to give its audiences the opportunity of hearing famous international musicians.

3. **Drama.**—There are many thousands of Australians to-day who have not only never seen a stage play but have never even had the opportunity of doing so. Radio drama has been able to bring to them the best plays of all ages and countries. The Australian Broadcasting Commission has two regular weekly drama programmes—"Saturday Night Drama" which presents the more popular material, and "Radio Repertory" in which classical and outstanding contemporary plays are broadcast. In addition, "National Theatre of the Air", which is a monthly feature, presents rather longer plays of the type of "Radio Repertory".

During the year 1947–48 the Australian Broadcasting Commission presented a total of 491 plays, including serials, of which half were original works written by Australian writers. Many of the other plays broadcast were adapted for radio by Australian playwrights. The Drama Department encourages the submission of original work by local dramatists, and is always anxious to receive material for consideration.

4. **Youth Education.**—The Australian Broadcasting Commission provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of 1948 was 5,773, which represents about half of the schools in Australia. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week day the "Kindergarten of the Air", which originated in Western Australia during 1942, at a time when kindergartens were closed by the threat of Japanese invasion. These broadcasts were the first of their kind anywhere in the world and are now not only presented in every State of the Commonwealth, but have recently been introduced in Canada and some European countries.

5. **Talks.**—The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs and on general and historical topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. This form of programme has proved popular with listeners but has by no means replaced the straight talk which usually runs from ten minutes to a quarter of an hour.

Two sessions which are designed to encourage discussion are the "Nation's Forum of the Air", and the talks designed for listening groups. In the former, a topic of a controversial nature is discussed by four speakers before a studio audience. After their initial speeches, the speakers are questioned by members of the audience or by local listeners who send their questions by telephone. The full proceedings of the Forum are published in book form. In the talks to listening groups, supplementary material relating to the broadcasts is provided for groups of listeners, organized by the Australian Broadcasting Commission, who meet in their homes or elsewhere to discuss points arising from the broadcast.

6. **Rural Broadcasts.**—The Rural Broadcasts Department was commenced in 1945 to serve the needs of country listeners. It has proved to be of great value to men and women on the land throughout Australia, by giving them the latest market reports and information on general conditions, and by keeping them informed on rural development overseas. Programmes are exchanged with radio organizations in England, Canada, the United States and elsewhere, and several visits to Australia by well-known farm radio personalities have also been arranged. The department has encouraged the work of Junior Farmer's Clubs in Australia, and has sponsored competitions for members in connexion with the Royal Agricultural Shows in Sydney and Melbourne.

7. **News.**—On the 1st June, 1947 the Australian Broadcasting Commission's independent News Service came into full operation. Since that date the Commission has collected the news for its bulletins independently of the press and it now has, in addition to a large staff throughout Australia, a London news room for the selection and transmission of overseas news secured from the great news agencies. Nine national news bulletins are broadcast daily, and are followed by State bulletins of news of State interest. In addition, two regional bulletins are broadcast by local stations in country areas. The Commission also rebroadcasts, by arrangements with the British Broadcasting Corporation, two overseas news bulletins each day.

8. **Other Activities.**—The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946, and Australian listeners are now able to hear full debates from the House of Representatives, and occasionally the Senate. At present these broadcasts are confined to one of the two transmitters in each capital city, but it is hoped that eventually country listeners will also be able to hear these broadcasts through the medium of shortwave transmissions.

The Children's Session is presented on each week day for children between the ages of 7 and 17. An important feature of this session is the Argonauts Club which children may join, and which encourages its members to contribute to the programmes and to do creative work such as painting, needlework, writing, poetry, etc. Part of the children's session is regularly devoted to an exchange of opinion on topical questions by members of the Argonauts Club. At present the club has more than 47,000 members.

The Australian Broadcasting Commission's variety and sporting programmes provide the lighter side of listening to the public. In its variety sessions the Australian Broadcasting Commission does everything possible to assist local artists in order to increase the amount of first class talent in this country. The Commission's dance bands in Sydney and Melbourne provide the accompaniment for the more important variety shows broadcast in these states, and are regarded as being two of the most outstanding bands in Australia.

The Australian Broadcasting Commission's coverage of sport at home and abroad is comprehensive. On Saturday afternoons the sporting panel provides listeners with the progress results and scores, and also descriptions from half a dozen or more fields of sport. Events of international interest such as Test Matches, the Davis Cup etc., are covered by simultaneous descriptions from Australian Broadcasting Commission commentators. In covering events overseas, the Australian Broadcasting Commission is indebted to the British Broadcasting Corporation for its collaboration in Great Britain, and the New Zealand Broadcasting Service for events in New Zealand.

In December, 1948 the Australian Broadcasting Commission's programmes were transmitted by 37 medium wave and 7 short wave stations. The 37 stations in operation at 30th June, 1947 are shown in Chapter V.—"Transport and Communication", § 6. "Radio Telegraphy and Telephony", page 217. The seven new stations were as follows:—Medium wave Stations—2NB (Broken Hill), 2NU (Manilla), 2TR (Taree) and 5AL (Alice Springs); Short wave Stations—VLT (Port Moresby) and VLI (Sydney). The short wave stations are used for giving service to listeners in the sparsely populated parts of Australia, and in New Guinea and adjacent islands. Twenty-five of the medium wave stations are situated outside the capital cities, and further regional stations will be constructed in the near future. When the additions have been made, the regional network combined with the short wave stations will transmit the Commission's programmes with clear reception to every part of Australia.

§ 12. The National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purposes of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. In various States it issues, by courtesy of the Traffic Authorities, a booklet with every motor driver's licence, and conducts continuous propaganda through the press and other sources. It also forms Junior Safety Councils in the schools for developing a safety conscience among children.

The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety. Posters are available to schools at cost in connexion with Health and Safety lessons in the schools. Small films specially taken are available for children's and home safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they are responsible being given a certificate to that effect. An industrial service of four posters per month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and was supplied to over 100,000 workers in factories last year. Committees deal with specific problems regarding traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has issued a 32-page booklet "Air Sense" for distribution with pilots' private licences through the Civil Aviation Department, and has a plan for emergency night landings for aircraft in difficulties.

The Council is supported by a Government Grant, public subscription and sales of service, and is a non-profit organization. Its work is carried on by a small paid staff controlled by committees and governed by an executive. The following committees, whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Propaganda.

§ 13. Commonwealth Disposals Commission.

1. **Constitution and Functions.**—The Commonwealth Disposals Commission was established under National Security (Disposal of Commonwealth Property) Regulations of June, 1944, for the purpose of disposing of surplus Commonwealth property acquired or used for defence purposes. In addition, the Commission was empowered under Executive Council Minute No. 69, dated 8th November, 1944, to dispose of surplus property, with the exception of land, acquired or used for other purposes. Provision for the continuance of the disposals regulations after the expiration of the National Security Act 1939–46 was made in the Defence (Transitional Provisions) Act.

Originally under the jurisdiction of the Minister for Supply and Shipping, the Commission now functions under the ministerial direction of the Minister for Supply and Development.

2. **Policy and Procedure.**—The principles of policy and methods of disposal which have been developed by the Commission are based upon broad fundamental objectives which, briefly stated, are designed to achieve an orderly, rapid and widespread distribution of surplus war goods at fair market prices and under conditions which will not prejudice the national economy or the maintenance of full employment in the post-war period. In general, the disposals programme has embraced the release and distribution of a wide variety of consumer goods in short supply during the period of re-adjustment to normal production, as well as the expeditious transfer to peace-time uses of plant and materials urgently required for governmental reconstruction work and general industrial rehabilitation and development. The commission has maintained a close liaison with industry and the Secondary Industries Division of the Department of Post-war Reconstruction, and surpluses of industrial buildings and plant have been disposed of as far as possible in those quarters where they could be most effectively utilized.

While concentrating upon the more positive aspects of its work, however, the Commission has kept constantly in mind the possibility that the dumping of large quantities of consumer goods on the civilian market might react adversely on current production and hence on the capacity of industry to afford full employment. Surpluses which are beyond the absorptive capacity of the Australian market are therefore made available for disposal overseas, and, through continued consultation with trade advisory panels set up in collaboration with the Associated Chambers of Commerce and Manufactures, courses of action which might be detrimental to the national economy have been avoided.

The following principles and methods of sale form the basis on which detailed disposals procedures have been developed :—(*a*) All sales, including those to Government Departments, are made at fair market prices and the closest association is maintained with the Prices authorities on all aspects of price policy ; (*b*) where suitable, goods are first offered to Commonwealth and State Government Departments and semi-governmental instrumentalities ; (*c*) disposal through trade channels in the case of commercial goods ; (*d*) sale by public tender ; (*e*) sale by auction ; and (*f*) sale by private treaty. Sales are conducted within categories (*b*) to (*e*) except where it is established beyond reasonable doubt that sale by private treaty is the only practicable course. The Commission does not sell retail, but special consideration has been given to the needs of UNRRA, the Red Cross and other relief organizations, as well as to the requirements of hospitals and bodies engaged in educational, charitable, health and general community activities.

3. **Administrative Organization.**—The head office of the Commission is in Melbourne. while regional and district offices have been established in the capital cities and at other points in remoter areas, such as New Guinea and the Islands, the Northern Territory and North Queensland.

Certain categories of goods, viz., motor transport, land, buildings and aircraft, as well as goods submitted to auction, are disposed of by the Commission's organization direct, while surpluses of other types are handled by various Commonwealth departments under a delegation of authority from the Commission. For the most part the agency departments consist of those departments and authorities which were responsible during the war years for the procurement or control of the supplies concerned.

Apart from its direct selling function, therefore, the task of the Commission's organization has been largely one of supervision to ensure that liquidation is effected as rapidly as possible and in accordance with the policies and procedures laid down. To assist in speedy liquidation, responsibility has been decentralized as widely as possible by the delegation of authority to executive officers, regional representatives and agency departments to enable them to complete transactions within prescribed financial limits and subject to the observance of disposals policy and procedure.

4. **Outline of Activities.**—The Commission began operations on 4th September, 1944. During the first year of its activities the Commonwealth was still at war and although goods to the value of £10,200,000 on realization were disposed of, this period was primarily one of preparation. The organization was established on a firm basis and policies and procedures were worked out along lines which enabled subsequent development to take place smoothly and efficiently. The close of the first year coincided approximately with the termination of hostilities and immediately the flow of surpluses rapidly increased.

Throughout the second year a heavy and continuous pressure for the disposal of surpluses was maintained owing to the withdrawal of troops from various areas for demobilization. This was the most active period of the disposals programme and the financial return for the year amounted to nearly £56,000,000. In its geographical aspect the task was a formidable one. Not only were the goods scattered throughout the mainland of Australia, often in remote areas, but to the north of the continent surpluses were awaiting disposal at points extending around a large part of the New Guinea coast line and right across the northern seas from the Solomons to Borneo. The tempo of operations continued to mount until October, 1946, when realizations for the month amounted to over £7,500,000. From a financial standpoint the period from May to November, 1946, during which monthly realizations averaged over £5,800,000, was the high water mark of the disposals' programme.

The gradual decline which commenced at the end of 1946 continued in 1947 and by 31st August of that year the rate of return was again down to slightly over £2,000,000 per month. The total realizations for the third year of the Commission's operations, however, were again considerable, amounting to £45,500,000. During that year the Commission's programme in New Guinea and the islands was brought to a close. Operations in that area made up one of the most interesting phases of the Commission's activity ; losses were taking place through rapid tropical deterioration and other causes and the most vigorous action on the part of the Commission was necessary. After large quantities of materials had been sold to the Civil Administration and to local residents to assist in the rehabilitation of the area, several auction sales were held. To these mainland buyers were taken by specially chartered sea and air transport. By the end of 1946 only residues of equipment remained at isolated points, and in June, 1947 the Commission withdrew its staff and handed over to the Civil Administration the responsibility for disposing of any surpluses which might come forward in those areas in the future.

During 1948 the volume of surpluses coming forward declined still further. In June, 1948, operations in the Northern Territory were concluded and the Commission's Darwin office was closed. In other States, where there has been a falling off in activity, the staff has been reduced. In addition, administrative economies have been effected by integration, where possible, of the disposals' organization with the Directorate of Supply, Department of Supply and Development.

At 31st August, 1948 the Commission completed its fourth year of operations and returns for the year stood at £22,500,000. This brought total realizations from disposals since the inception of the programme to £125,500,000. This figure does not include bulk transfers of equipment in the Borneo-Morotai area to the Netherlands East Indies Government, the total estimated book value of which was £10,000,000

5. **Principal Commodity Categories.**—The following details show the principal commodity categories and the amounts realized to 31st August, 1948 :—

> Motor Vehicles, Cycles and Spare Parts, £16,196,978 ; Textile Basic Manufatures, £13,278,082 ; Metal-working Machinery, £11,528,943 ; Real Property (land and buildings), £10,874,339 ; Apparel, Footwear and Fabricated Textile Products, £9,679,895 ; Non-ferrous Metals. £9,051,421 ; Foodstuffs, £5,567,629 ; Ships, Small Watercraft and Marine Propulsion Machinery, £3,858,966 ; Steel, Iron and Iron and Steel Scrap, £3,721,972 ; Agricultural Machinery Implements including Tractors, £3.569,371 ; Chemicals, £2,861,056 ; Goods sold at auction (unclassified), £9.922,424 ; and Other Items, £25,402,907 ; Total, £125,513,983.

6. **Future of the Commission.**—By the end of the fourth year of the Commission's existence, the bulk of surpluses had been disposed of, and notwithstanding the fact that realizations still exceeded £1,000,000 per month, it was felt that the time had arrived to consider the desirability of stabilizing disposals arrangements on a departmental basis. The matter was reviewed by Cabinet which decided that for the time being the disposals organization should continue in its present form. When the Commission ceases to function the responsibility for the disposal of goods will be vested in the Department of Supply and Development, with the exception of real property (land and buildings) which will be handled by the Department of the Interior. In the meantime, action to integrate the Commission's activities, wherever possible, with those of the Department of Supply and Development will be continued, and in this way the ultimate transfer of the major portion of disposals' responsibility to that Department will be facilitated.

§ 14. Division of Industrial Development.

1. **General.**—The Division of Industrial Development within the Department of Post-war Reconstruction was originally established in 1945, on a temporary basis, as the Secondary Industries Division to carry out the administrative work of the Secondary Industries Commission which had been established in October, 1943. In January, 1948 the name was changed to the Division of Industrial Development. Gradually, wider functions have been undertaken.

In August, 1948 the Division was established on a permanent basis. Its chief functions are set out hereunder.

2. **Functions.**—(i) *Encouragement and advancement of industrial development necessary for Commonwealth responsibilities.* Many industrialists, both local and overseas, wishing to establish new industries or expand existing industries have sought information regarding secondary industry in Australia, size of markets, availability of factory space, etc. Such information has been supplied by the Division of Industrial Development. All possible assistance has been rendered to industrialists wishing to expand industrial production. The Division systematically records data relating to manufacturing activity in Australia.

(ii) *Exercise of Commonwealth responsibilities with respect to the national policy of decentralization.* The Division has been responsible for the sale or lease of government-owned factories which were built during the war. Many of these factories are located in Queensland, South Australia, Tasmania, Western Australia and the country areas of Victoria and New South Wales. Some 186 leases and 19 sales of such factories have been effected and a wide range of products is now being manufactured in decentralized areas.

(iii) *Promotion of efficiency in industry ; study of technical, production and managerial problems ; encouragement and assistance in dissemination and application of new knowledge and new methods.* Manufacturers in Australia are kept informed by the Division regarding any technical and scientific information from overseas of which it becomes aware. Reports prepared by the scientific and technical missions in ex-enemy countries are disseminated, and a micro-film service, under which copies of German machine tool drawings, original German summary documents and Patent Applications and Specifications can be made available to industrialists, is provided by the Division. The Materials Handling Bureau of the Division, upon request, advises manufacturers regarding problems of materials handling and also arranges public demonstrations showing the latest methods employed in handling materials. Advice on chemical problems is tendered by the Chemical Section of the Division.

(iv) *Undertaking for publication continuing studies of structure and operation of Australian manufacturing industries.* Continuous study of a wide range of Australian industries is being undertaken by the Division. Up to 30th November, 1948, brief reviews of the following industries had been published by the Division :—Footwear, tractor, cosmetics, cotton textile, furniture, agricultural implements, rubber, leather and carpet.

§ 15. Daylight Saving.

The Commonwealth Government, under National Security Regulations, operated a scheme of daylight saving during summer time of the years 1941–42 to 1943–44 throughout Australia, with the exception for the last year of Western Australia. For particulars of the actual periods of operation *see* Official Year Book No. 36.

§ 16. Rent Control.

1. **Need for Rent Control.**—Prior to the outbreak of the 1939–45 War, rent control legislation existed in Victoria and Queensland only. When hostilities commenced, the need became immediately apparent for more rigid control of the relationship between landlord and tenant in order to avoid rent inflation arising from increased spending power and from the exploitation of the acute shortage of housing accommodation in areas surrounding military camps and war-time industries.

On 9th September, 1939, a conference on war-time controls between the Premiers of all States and Commonwealth authorities resolved that all the States would co-operate with the Commonwealth in setting up the machinery necessary for rent control, and that in effecting this the existing instrumentalities would be retained as far as possible.

2. **National Security (Fair Rent) Regulations, September, 1939.**—On 29th September, 1939, the Commonwealth, under its emergency powers, issued the National Security (Fair Rent) Regulations in order to provide a basis for action in those States lacking rent control legislation. These regulations empowered the Governor-in-Council of a State to constitute Fair Rents Boards and also gave him discretionary power to fix the maximum rents of certain classes of premises at the 31st August, 1939 level during the period ending 31st December, 1939. The two main features of the regulations were the provisions enabling Fair Rents Boards to determine fair rents, and those protecting tenants against eviction.

The powers given to the States under the regulations were accepted by Victoria, Queensland, and Tasmania, where rents were pegged at the rates in operation on 31st August, 1939, and Fair Rents Boards were constituted. The Commonwealth regulations were also introduced in the two territories administered by the Commonwealth, and Fair Rents Boards were constituted at Canberra and Darwin. In the other three States steps were taken to give effect to the decision of the Premiers' Conference by the introduction of State legislation.

An important feature of rent control in the Commonwealth up to this stage was that the fair rents regulations could not be enforced in any State by the Commonwealth Government, and their introduction was left to the discretion of the Governor-in-Council of the State concerned.

3. **National Security (Landlord and Tenant) Regulations, November, 1941.**—On 28th November, 1941, new regulations under the name of National Security (Landlord and Tenant) Regulations were brought into operation. Their general effect was to give greater security to tenants and to extend that security to tenants in States where, in the opinion of the Government, local legislation was inadequate. They covered all premises except those ordinarily let for holiday purposes only, premises licensed for the sale of spirituous and fermented liquors, and premises of agricultural properties, and they applied to any part of any premises separately let, and to furnished premises.

The provisions of the regulations relating to termination of tenancies, the recovery of possession of premises and the ejectment of tenants from premises were expressed so as to apply in each State and Territory of the Commonwealth. Moreover, the Minister could, by order, apply the other provisions of the regulations to any State or Territory where he was satisfied that the law of that State or Territory did not sufficiently carry out the object of the regulations. Orders to this effect were made in respect of New South Wales on 28th November, 1941, the Australian Capital Territory on 29th December, 1941, Tasmania on 7th March, 1942, Victoria on 26th March, 1942, Queensland on 13th April, 1942, and Northern Territory on 29th January, 1943.

These regulations were subjected to considerable amendment between their introduction and the date upon which they were repealed. Generally speaking, however, their main features were the following :—

(i) *Determination of Rents.* The maximum rent of all premises to which the regulations applied was fixed at the amount ruling at the "prescribed date" declared by the Minister in respect of the State or Territory in which the premises were situated. In the cases of Victoria and Queensland the 31st December, 1940 was fixed as the prescribed date, while, in the cases of New South Wales, Australian Capital Territory, Tasmania and Northern Territory, the date so fixed was the 31st August, 1939. The regulations also made provision whereby the landlord or tenant could apply to a Fair Rents Board for a determination of the fair rent of the premises.

(ii) *Termination of Tenancies.* The regulations provided that a landlord should not undertake any proceedings for the ejectment of his tenant or the termination of the tenancy except in the manner prescribed. The regulations limited the grounds on which notice to quit might be given and prescribed the period of the notice.

4. **Conference with Magistrates, March, 1943.**—At the end of March, 1943, a conference with magistrates at Canberra recommended that some central organization should be set up which would be in a position to give advice when required, and which could co-ordinate the activities of the Fair Rents Boards and take action to ensure as far as possible that a uniform policy was followed in determining rents.

Partly as a result of this conference, it was decided that steps should be taken to repeal the old regulations and to replace them by new regulations, which were not, however, gazetted until 15th June, 1945. Their operation was postponed until 2nd July, 1945, in order to enable the public to become acquainted with them.

5. **New Regulations, June, 1945.**—The most outstanding change in the new regulations was in the field of rent control, provision being made for the appointment of a Commonwealth Rent Controller with power to fix the rent of rooms and other shared accommodation. In the cases of all other premises, the determination of rents was still left with the Fair Rents Boards. It was felt that this change would not only afford relief to the Fair Rents Boards which had in many cases been overtaxed by the number of applications before them, but would also permit a more simple and speedy determination of room and apartment rents. The regulations provided for appeal from the Controller to a Fair Rents Board.

These regulations, as before, not only protected tenants against excessive rents but also gave them security of tenure. The provisions of the regulations governing rent control applied throughout the Commonwealth except in South Australia and Western Australia. The remaining provisions of the regulations applied in all States and Territories of the Commonwealth.

The Minister had power by order to exclude any premises from the operation of the regulations, and, by an order dated 2nd July, 1945, the following premises were excluded :—

(1) Premises licensed for sale of spirituous or fermented liquors.
(2) Premises ordinarily leased for holiday purposes only.

The new regulations, when first issued, were administered by the Minister for Trade and Customs. On 16th October, 1945, however, their administration was transferred to the Minister of State for Works and Housing under whom it was extended to 31st December, 1947 by the Defence (Transitional Provisions) Act 1946.

6. **Appointment of Commonwealth Rent Controller and Deputy Rent Controllers.**—On 2nd July, 1945 a Commonwealth Rent Controller was appointed, and on the same date he appointed deputies in the various States and Territories of the Commonwealth. The Deputy Rent Controllers dealt with applications for determinations of rent in the case of shared accommodation, investigated any breaches of the regulations and took all steps necessary to ensure compliance with them.

The Controller did not personally engage in the determination of rents of shared accommodation. His task was to co-ordinate the activities of his various Deputies and to ensure as far as possible their uniform carrying out of policy. All matters for prosecution were referred to him for consideration before any proceedings were commenced.

7. **Further Amendments to Regulations.**—In order to prevent unscrupulous lessors from defeating the regulations, "holiday premises" were re-defined, in December, 1946, to ensure that only *bona fide* holiday lettings were excluded from the operation of the regulations.

The next important change was the abolition of the divided jurisdiction in fixing fair rents. Because of the legal atmosphere surrounding the determination of fair rents of premises, other than shared accommodation, and the absence of facilities for investigating complaints, Cabinet decided to transfer the jurisdiction of the Fair Rents Boards to the Controller. A right of appeal to a Fair Rents Board (consisting of a magistrate sitting alone) was, however, provided in the amendment of the regulations taking effect from 30th December, 1946.

Further amendments, of a legal or procedural nature, were made in March, 1947. They included the restriction of eviction proceedings to courts of summary jurisdiction, the disallowing of appeals over eviction cases except on questions of law, the protection (for a period of six months after the transaction) from a notice to quit of tenants of houses sold by the lessor, and the prevention of traffic in tenancies by including, as new grounds for an eviction order, the transfer of a lease by the lessee or a sub-lease without the approval of the lessor.

Finally, on 26th February, 1948, amendments were found necessary to resolve administrative difficultues created by a decision of the High Court, which held that the Controller was unable to vary determinations of his own motion.

8. **The Defence (Transitional Provisions) Act and the Referendum.**—At the Premiers' Conference in August, 1946, the continuance of various war-time controls exercised by the Commonwealth was considered, and it was resolved that rent and eviction control should continue to be exercised by the Commonwealth supported by appropriate complementary State legislation. Legislation giving effect to this resolution was at length passed by all State Parliaments, although there was variation from State to State in the period of operation (e.g. the Victorian Act expired on 30th June, 1947 and was not re-enacted).

Meanwhile, Federal Cabinet had decided to pass substantive legislation to replace the Regulations which depended on the National Security Act. Time did not allow for preparation of this legislation, and, instead, the Defence (Transitional Provisions) Act was passed on 14th December, 1946. This had the effect of continuing in operation various regulations, including the National Security (Landlord and Tenant) Regulations, for a further period.

The regulations were dependent for their validity upon the defence power contained in the Constitution, and the danger of a successful challenge in the High Court became increasingly great as time passed. Serious doubts also existed whether the various economic controls could be effectively exercised by the individual States, especially as the Victorian precedent introduced doubts as to the retention of the necessary legislation in the other States. Accordingly the Government held a referendum to obtain approval for the Commonwealth to legislate on rents and prices (including charges). On the defeat of this referendum, the Commonwealth Government decided to return various controls, including that over rents and evictions, to the States. The transfer was effected on 16th August, 1948, so far as New South Wales, Victoria, South Australia, Western Australia and Tasmania were concerned, and on 1st September, 1948, in the case of Queensland. The change in regard to South Australia and Western Australia related only to evictions as both these States controlled rents under State law.

9. **Statistics.**—In the period of two and a half years ended 30th June, 1948, determinations of rent of shared accommodation totalled 35,768; 20,954 rents were decreased by rent control action, 6,147 increased and 8,667 were unchanged. The net effect of 35,768 determinations was a reduction of about 13 per cent. in total weekly rentals from nearly £50,000 prior to determination to about £43,000 after rents were fixed. In the eighteen months during which the Controller exercised jurisdiction over rents of complete units of accommodation, 20,312 determinations were made; the rents of 5,491 complete units were reduced, 10,499 increased and 4,322 were unchanged.

Eviction proceedings in the two and a half years ended 30th June, 1948 resulted in 15,593 applications being granted and 11,291 refused, a total of 26,884 applications dealt with.

10. **Regulations for Protection of Members of Forces and War Workers.**—While the National Security (Landlord and Tenant) Regulations applied to civilian tenants, various provisions were inserted in other regulations to give special protection to members of the forces and to war workers. Thus National Security (War Service Moratorium) Regulations, administered by the Attorney-General, contained rent provisions which conferred additional protection on persons who were "protected persons" within the meaning of the regulations, and also enabled a protected person to require the owner to let to him a dwelling house which was vacant or about to become vacant. Protection was also extended to members of the Civil Construction Corps and their dependants by a provision in National Security (Allied Works) Regulations. Special provision for war workers in regard to rents and rented premises was also made in National Security (Housing and Accommodation) Regulations.

§ 17. Housing Division.

In July, 1945 the Commonwealth Government created the portfolio of Works and Housing, thus amalgamating under one Minister a number of housing functions previously shared by several Commonwealth Departments. Within the new department the Housing Division was charged with the exercise of most of these functions.

The chief responsibility of the Division is the administration of the Commonwealth and State Housing Agreement, under which the Commonwealth and State Governments are co-operating in a plan to provide good standard homes for families in the moderate income groups. A feature of the rental provisions of the agreement is a system of rental rebates, whose basic principle is that a family with income at the basic wage level need not pay more than one-fifth of its income in rent, regardless of the economic rent of the dwelling. As the family income rises above or falls below the basic wage, so does the rebate diminish or increase. The Commonwealth bears three-fifths, and the State concerned two-fifths, of all losses occasioned by the rental rebate system. The agreement also provides for the sale of dwellings to tenants.

From the inception of the Commonwealth and State Housing Agreement in April, 1944 to 30th June, 1948, the five States operating under the agreement (South Australia, although a signatory, has not yet operated under the agreement) had completed 15,271 dwellings. A further 10,090 dwellings were under construction at that date. In the period mentioned, the Commonwealth advanced £31,115,000 to the States to finance the acquisition and development of land and the construction of dwellings.

The Housing Division, in administering the agreement, examines technical and financial aspects of housing by the State Housing Authorities. Close attention is given to uniform treatment, as between the States, in applying the different provisions of the agreement, and to ensure that the Commonwealth's interests are safeguarded and the terms of the agreement observed.

As part of its policy of assisting the Australian housing programme, the Division is engaged in many tasks, including the development, under the aegis of the Standards Association of Australia, of housing specifications and codes for low income group housing, the review of local supplies of materials, components, fittings, equipment and tools, examination, with other bodies, of the application of new types of materials and methods of construction to low-income housing and proposals for the importation of complete dwellings and components.

To keep Australia abreast of housing developments, the Division undertakes technical and economic research on various aspects of housing, and maintains a close watch on the latest thought and practice in developments overseas. Methods and policies that might be useful to State Housing Authorities and other interested bodies are published in *Australian Housing*, a bulletin issued by the Division at regular intervals, and a regular flow of informative material is maintained to authorities in all States.

The Division has been responsible for the development of the Australian Housing Cost Index as part of its continuous task of examination and analysis of house building costs. The index is published at quarterly intervals, and shows the trend in housing costs in the six capital cities of the Commonwealth.

Finally, the Division is concerned with other tasks related to the housing programme. Recently, these have included such questions as the special problems arising from slum clearance, the housing needs of different sections of the community—e.g., old persons—review of prefabricated housing proposals and decentralization.

§ 18. War Service Homes.

The provision of War Service Homes is now a function of the Department of Works and Housing and the administration of the War Service Homes Act is under the immediate control of the Director of War Service Homes.

Since the inception of operations under the War Service Homes Act (figures in parentheses indicate cases where eligibility has been established and assistance granted as a result of service during the 1939–45 War) 56,949 (11,373) applications have been approved ; 23,309 (1,757) homes have been built, or for which assistance to build has been given ; 16,221 (3,083) homes have been purchased ; and 4,433 (1,293) mortgages have been discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1948 was 43,963, including 6,133 to persons who served during the 1939–45 War.

During 1947–48 5,349 (5,091) applications were approved ; 1,247 (1,199) homes were built or for which assistance was given ; 1,758 (1,689) homes were purchased ; and 672 (632) mortgages were discharged. The total number of homes provided during the financial year 1947–48 was 3,677 (3,520).

The total capital expenditure from inception to 30th June, 1948 was £37,082,438, including £4,438,681 for 1947–48. Receipts from inception to 30th June, 1948 amounted to £39,025,925, including £1,627,375 during 1947–48. Of the total receipts, £17,387,418 has been paid to the National Debt Sinking Fund, including £1,115,247 for 1947–48.

As at 30th June, 1948 the total amount of insurances in force, including cover notes, amounted to £24,136,195. The premium income for 1947–48 amounted to £29,831, and expenditure from the War Service Homes Insurance Trust Account to £15,013.

As at 30th June, 1948, arrears of instalments outstanding amounted to £301,286 or 0.88 per cent. of the total instalments due.

§ 19. New Building.

1. General.—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to *new* building only, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

The following definitions of terms used in this section are necessary to understand the data presented :—

Owner-Builder. A person who is actually building his own house or is having his house built under his own direction without the services of a contractor.

Commenced. A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, it is probable that interpretations placed upon it by informants are not entirely uniform.

Completed. A building is regarded as having been completed when the builder has fulfilled the terms of the contract. As with commencements, the interpretations placed upon this definition may vary.

Under Construction. A building remaining uncompleted at the end of a period is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

Employment. The figures of employment relate to persons actually working on new buildings on a specified day. They include working principals, employees, men working as, or for, sub-contractors and men temporarily laid off on account of weather. In addition, they include some employees engaged on alterations, additions, renovations or repairs to buildings *when these jobs are undertaken by a contractor who builds new buildings.* The figures exclude persons working on owner-built houses.

Values. All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. **Value of New Buildings.**—(i) *Completed,* 1947–48. The following table shows the value of all new buildings completed in each State during 1947–48, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

NEW BUILDINGS COMPLETED, 1947–48 : VALUE.

(Including Estimated Value of Owner-built Houses).

Kind of Building.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Houses—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000
Brick, Brick Veneer, Concrete and Stone . .	8,882	10,047	1,479	3,087	1,510	590	238	25,833
Wood (Weatherboard, etc.)	2,245	4,545	5,086	24	251	1,114	186	13,451
Fibro Cement . .	8,769	1,234	1,940	259	1,120	32	6	13,360
Other	118	223	165	19	11	5	. .	541
Total Houses . .	20,014	16,049	8,670	3,389	2,892	1,741	430	53,185
Flats	823	200	29	. .	. .	5	. .	1,057
Shops with Dwellings . .	180	123	39	2	13	16	. .	373
Shops without Dwellings	98	37	56	16	23	23	. .	253
Hotels, Guest Houses, Boarding Houses, etc.	30	48	10	25	29	17	23	182
Factories	1,765	609	291	430	88	310	4	3,497
Other new Buildings . .	1,395	825	1,249	218	283	167	52	4,189
Total Other Buildings . .	4,291	1,842	1,674	691	436	538	79	9,551
Total New Buildings . .	24,305	17,891	10,344	4,080	3,328	2,279	509	62,736

(ii) *Commenced, Completed and Under Construction,* 1945–46 *to* 1947–48. The following table summarizes the values of all new buildings commenced, completed and under construction for each State for the years 1945–46 to 1947–48.

NEW BUILDINGS : VALUE.

(Including Estimated Value of Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
COMMENCED.								
1945–46	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
1946–47	30,458	20,398	9,319	4,848	3,036	2,718	749	71,526
1947–48	36,196	26,841	11,898	5,341	4,420	3,607	2,606	90,909
COMPLETED.								
1945–46	9,305	5,471	3,320	1,682	974	627	112	21,491
1946–47	17,097	11,067	7,257	2,744	2,117	1,417	310	42,009
1947–48	24,305	17,891	10,344	4,080	3,328	2,279	509	62,736
UNDER CONSTRUCTION AT END OF YEAR.								
1945–46	14,614	9,809	3,164	2,387	1,571	1,403	430	33,378
1946–47	30,041	19,279	5,337	4,774	2,872	2,759	884	65,946
1947–48	44,461	29,603	7,088	6,170	4,452	4,146	3,013	98,933

(*a*) Not available.

3. **Numbers of New Houses.**—(i) *Completed*, 1947–48. The following table shows the numbers of new houses completed in each State during 1947–48, according to the material of their outer walls.

NEW HOUSES COMPLETED, 1947–48 : NUMBER.

(Including Owner-built Houses.)

Material of Outer Walls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone ..	4,926	6,510	1,025	2,663	1,189	373	135	16,821
Wood (Weatherboard, etc.)	1,958	3,893	5,517	30	337	1,127	132	12,994
Fibro Cement	7,875	1,259	2,399	292	1,230	41	4	13,100
Other	99	184	217	24	15	3	..	542
Total	14,858	11,846	9,158	3,009	2,771	1,544	271	43,457

(ii) *Commenced, Completed and Under Construction*, 1945–46 *to* 1947–48. The next table provides a summary, by States, of the numbers of new houses commenced, completed and under construction for the years 1945–46 to 1947–48

NEW HOUSES : NUMBER.

(Including Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1945–46	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1946–47	17,720	12,959	8,925	3,269	2,405	1,642	323	47,243
1947–48	19,807	14,878	9,399	3,580	3,075	2,062	393	53,194
COMPLETED.								
1945–46	5,596	3,666	3,385	1,332	860	479	58	15,376
1946–47	12,187	7,436	7,746	2,227	1,792	1,070	149	32,607
1947–48	14,858	11,846	9,158	3,009	2,771	1,544	271	43,457
UNDER CONSTRUCTION AT END OF YEAR.								
1945–46	9,200	6,142	2,441	1,559	865	1,013	188	21,408
1946–47	14,737	11,680	3,627	2,654	1,521	1,557	368	36,144
1947–48	19,686	14,712	3,868	3,203	1,841	2,065	491	45,866

(a) Not available.

4. **Numbers of New Flats.**—The figures in the foregoing tables do not include particulars of new flats. The summary below shows the numbers of new flats commenced, completed and under construction in Australia for the years 1945–46 to 1947–48, together with State details for 1947–48. It should be noted : (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

NEW FLATS: NUMBER.

(Individual Flats).

State.	Commenced during Period.	Completed during Period.	Under Construction at end of Period.
1947–48—			
New South Wales	1,093	557	1,141
Victoria	372	167	526
Queensland	41	41	13
South Australia	6	..	6
Western Australia	..	..	..
Tasmania	21	3	20
Australian Capital Territory	48	..	48
Total	1,581	768	1,754
Total, 1946–47	1,035	319	887
„ 1945–46	(*a*)	46	178

(*a*) Not available.

5. **Persons engaged in New Building.**—The following table shows, by States, the number of persons (including contractors and sub-contractors actually working on jobs) engaged on jobs *carried out by builders of new buildings* at 30th June, 1946, 1947 and 1948. Particulars for 30th June, 1948 show the numbers of tradesmen, contractors, sub-contractors and wage earners engaged. For an explanation of the field of employment covered *see* para. 1 of this section.

PERSONS ENGAGED IN NEW BUILDING.

(Excluding Persons working on Owner-built Houses).

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
30th June, 1948—								
Carpenters	15,089	10,843	6,293	2,274	2,116	1,767	334	38,716
Bricklayers	4,217	2,608	592	1,137	553	220	122	9,449
Painters	3,299	2,008	1,078	590	368	248	83	7,674
Electricians	2,111	1,006	700	246	176	122	25	4,386
Plumbers	3,605	1,877	1,061	458	356	188	57	7,602
Builder's Labourers	6,585	3,626	1,687	1,294	1,102	718	236	15,248
Other	6,225	3,424	1,208	1,121	920	535	61	13,494
Contractors (*a*)	4,538	3,470	2,143	680	503	478	26	11,838
Sub-contractors (*a*)	4,854	3,221	1,127	674	421	300	29	10,626
Wage earners	31,739	18,701	9,349	5,766	4,667	3,020	863	74,105
Total	41,131	25,392	12,619	7,120	5,591	3,798	918	96,569
Total 30th June, 1947	34,845	21,356	12,184	6,454	5,242	3,369	702	84,152
„ „ „ 1946	26,420	17,429	8,883	5,429	4,175	2,514	410	65,260

(*a*) Actually working on jobs.

§ 20. Clothing and Food Rationing.

1. **General.**—The rationing of clothing and certain foodstuffs was established early in the 1939–45 War, but has since been discontinued with the exception of butter and tea which in 1949 still remain on the list of rationed goods. For greater detail as to the scale of rationing *see* Official Year Book No. 36, pp. 1084–1090.

2. **Clothing.**—Clothing rationing, except for some further easing in the incidence of its severity, was continued during 1947 and into 1948 on the same general lines as those set out in the previous issue. The principal reason for its continuance was shortage in supply of woven piece goods, in particular cottons from overseas. Woven cotton piece goods represent approximately two-thirds of Australian consumption requirements for outer clothing and household uses, the remaining third being about equally divided between rayon and wool. With the lifting of export controls in the United States of America early in 1947, licences were issued to merchants for extensive quantities of cotton and rayon piece goods for import from this source, and although many of the materials were in types of lesser utility (fancy dress cloths and furnishings), it nevertheless appeared likely that these imports would meet the overall deficiences in supplies available from the United Kingdom and India. With the prospect of the early arrival of the main portion of the goods licensed, trade representations for an easing in the rationing scale were considered and resulted in a reduction, from 1st July, 1947, of approximately 28 per cent. in the average coupon ratings of clothing and clothing piece goods. No change, however, was considered practicable for household cloths, i.e., sheetings, etc., the supply of which remained precarious, and consumption even at the severely rationed level was maintained only at the expense of a gradually reducing stockpile.

Taking into account prospects of continuing supplies, at least of utility cloths, from the United States, the coupon reductions made at 1st July were regarded as a first step towards a complete de-rationing of clothing by or before the end of 1947. The dollar crisis which developed soon afterwards, however, as well as virtually precluding the import of further piece goods from America, resulted in a review of all licences already granted against which the goods had not been imported. This review resulted in the cancellation of portion of the undelivered goods concerned in these licences.

Supplies from the United Kingdom and India, which are unrestricted by the Australian Government, are completely inadequate to meet our consumption needs, even on a rationed level and, during the continuance of restriction on the use of dollars, imports can be supplemented only by quantities available from those continental countries where exchange is favourable to sterling. Australian domestic production of woven cotton and rayon piece goods is negligible in comparison with our total requirements and cannot be quickly expanded owing to lack of suitable plant, experienced labour and, in particular, of supplies of cotton and rayon yarn.

Consumption of woollens and worsteds, accelerated by the favoured coupon ratings extended to these since 1945, kept pace with the expected improvement in production, there being about 20 per cent. increase in both production and consumption over the two years 1946 and 1947.

Rationing of clothing was kept under review, however, and on 16th June, 1948 the Prime Minister stated that it was considered that the general supply position warranted its early abandonment. The ending of clothes rationing was therefore announced on 21st June, 1948.

3. **Food.**—(i) *Review of Food Rationing.* Food rationing in Australia was introduced as a war-time necessity in 1942, in order to ensure that the foodstuffs in demand were so allotted as to meet the requirements of the Armed Services based upon Australia, and to provide for an equitable distribution among civilians.

The commodities subject to coupon rationing were Tea, Sugar, Butter and Meat. Sugar rationing was introduced on 31st August, 1942, and ended on 2nd July, 1947. The ration rate throughout the period was 1 lb. per head per week, plus an allowance for jam making of 10 to 12 lb. per head per annum. The rationing of meat commenced on 17th January, 1944 and ceased on 21st June, 1948. The adult rate varied from 2¼ lb. per head per week in 1944 to about 1.8 lb. per head per week in 1945, remaining at this level until rationing ended in 1948.

The continuance of tea rationing into 1949 is due to the shortage of world supplies. The original ration rate was 1.6 oz. per head per week, but on 19th October, 1942 it was increased to 2 oz. and has since remained at that level.

Although adequate supplies of butter are available to meet local requirements, rationing at the rate of 6 oz. per head per week is still maintained in 1949. The purpose of continuing the rationing of butter is to restrict local consumption so as to provide a maximum quantity for export to meet short supplies overseas, particularly in the United Kingdom.

(ii) *Consumption of Rationed Foodstuffs.* The following table, showing the annual civilian consumption in Australia of foodstuffs which were rationed during the 1939–45 War, illustrates the reduced civilian consumption of these commodities brought about by rationing.

ANNUAL CIVILIAN CONSUMPTION OF RATIONED FOODSTUFFS (*a*) : AUSTRALIA.

Period.	Tea.	Sugar.(*b*)		Butter.	Meat.	
		As Sugar.	In manufactured products.		Couponed Meat.(*c*)	Other Meat.(*d*)
	Rationed from July, 1942.	Rationed from August, 1942 to July, 1947.	Not subject to coupon rationing.	Rationed from June, 1943, and reduced June, 1944.	Rationed from January, 1944 to June, 1948.	Not subject to coupon rationing.
Average, 3 years ended	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.
1938–39	21.1	216.5	110.1	101.0	692.2	83.9
1943	17.1	205.0	121.0	96.5	644.5	63.0
1944	18.0	210.7	129.0	80.7	566.4	82.2
1945	19.5	220.8	123.5	78.5	531.2	79.6
1946	22.1	231.6	167.5	82.8	567.1	98.0
1947(*e*) ..	22.2	245.3	177.7	82.3	576.7	99.9

(*a*) Includes catering permits, but only the estimated civilian proportion of industrial permits. (*b*) In terms of refined sugar. (*c*) Fresh beef, mutton, lamb and pork (in terms of carcass weight); this includes some pork consumed in smallgoods which was not rationed. It includes in addition, meat consumed on farms and in unrationed areas. (*d*) Canned meat, bacon and ham and offal expressed in terms of carcass weight. (*e*) Subject to revision; includes consumption by the Armed Services.

In addition to the commodities mentioned above, other items of foodstuffs were subjected to some measure of control under war-time conditions. These were not subject to coupon rationing, but their availability for civilian consumption was determined after other priorities had been met. The items included Bacon and Ham, Eggs, Milk, Cream and Rice. By 1949 there was little lack of supplies in these items, except for cream and rice.

Restrictions on the sale of cream are still imposed, and civilian supplies of rice are being diverted to meet the requirements of rice-eating peoples overseas. The only supplies of both items entering civilian consumption in Australia are restricted to hospitals and approved medical cases, but resident Asiatics also receive a weekly allowance of rice.

§ 21. Consumption of Foodstuffs and Beverages.

1. **Quantities Consumed.**—Previous issues of the Year Book included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940–41 (*see* Official Year Book No. 36, pp. 1098–1100). In this issue these long-term comparisons are replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944, in comparison with average annual consumption during the three years ended 1938–39.

The estimates of total consumption and consumption per head of population in Australia in the two tables following have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as reasonably accurate, there are some deficiences to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of visible oils and other fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. Other difficulties occur in the compilation of statistics of consumption for which no allowance has been made. These include (i) the consumption by the Services during the war years of some minor commodities, (ii) the absence of particulars of stock movements in a limited number of cases, (iii) the disposal of surplus Army stores after the close of the war and (iv) the purchase of foodstuffs on the civilian market and the despatch of these quantities overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head shown in the second table following have been checked, wherever possible, with data from other sources which confirm the reliability of the methods used. The data were obtained principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council.

There has been a general upward movement in the consumption per head of population of most foodstuffs and beverages in Australia from the levels of consumption during the three years immediately preceding the 1939–45 War. The principal commodities which show a decline in consumption are meat, butter and tea, each of which has been subject to consumer rationing.

More detailed information on the consumption of foodstuffs and beverages is contained in the publication, *Report on Food Production and the Consumption of Foodstuffs and Nutrients in Australia,* issued by this Bureau.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING CONSUMPTION ANNUALLY : AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936–37 to 1938–39.	1944. (*a*)	1945. (*a*)	1946. (*a*)	1946–47. (*b*)	1947. (*b*)
Milk and Milk Products—							
Fluid Whole Milk	Mil. gals.	161	184	185	209	211	215
Fresh Cream	'000 tons.	19.7	3.8	3.8	6.0	8.0	6.9
Condensed Milk (Sweetened and Unsweetened) ..	,,	9.9	8.4	10.4	9.7	9.6	15.0
Concentrated Whole Milk ..	,,	1.3	5.6	4.9	12.0	9.1	10.6
Powdered Milk—							
Full Cream	,,	8.1	7.3	9.0	11.1	9.2	10.1
Skim	,,		1.2	1.3	1.6	2.1	2.3
Infants' and Invalids' Foods (including Malted Milk) ..	,,	3.0	3.2	4.0	5.4	5.1	4.8
Cheese	,,	13.4	17.8	18.0	20.7	20.3	18.0
Total (in terms of Milk Solids)	,,	119.9	130.4	133.4	154.2	153.7	157.0
Meat—							
Beef (bone-in weight) ..	,,	442.0	273.1	260.6	305.1	324.6	335.0
Mutton (bone-in weight) ..	,,	183.4	185.9	180.0	168.1	154.7	145.1
Lamb (bone-in weight) ..	,,	46.1	88.7	76.0	74.6	72.8	79.5
Pork (bone-in weight) ..	,,	31.8	18.7	14.6	19.3	22.9	17.1
Offal	,,	25.7	27.1	26.4	29.6	31.1	30.4
Canned Meat (canned weight)	,,	(*c*)	5.5	5.5	8.0	8.5	9.3
Bacon and Ham (cured weight)	,,	31.4	31.6	30.0	39.5	42.8	39.3
Total (in terms of carcass weight)	,,	776.1	648.6	610.8	665.1	678.1	676.6
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	,,	29.8	38.6	43.6	52.8	54.2	54.6
Fish—							
Fresh (edible weight) ..	,,	10.7	13.5	15.8	17.3	20.2	20.8
Shell (edible weight) ..	,,	2.1	1.0	1.1	1.4	1.4	1.3
Canned (edible weight). ..	,,	12.4	..	0.5	9.2	8.8	8.2
Total (edible weight) ..	,,	51.5	36.9	42.7	58.5	61.8	62.0
Eggs and Egg Products—							
Shell Eggs	,,	78.7	87.1	87.3	88.2	88.9	87.1
Liquid Whole Egg (*d*) ..	,,	2.9	5.6	9.2	7.2	8.4	8.5
Total (Shell Egg equivalent)	,,	81.6	92.7	96.5	95.4	97.3	95.6
	mil. doz.	139.3	158.2	164.7	162.8	166.1	163.2
Fats and Oils—							
Butter	'000 tons.	101.0	80.7	78.5	82.8	84.9	82.3
Margarine—							
Table	,,	2.8	1.0	1.0	2.3	2.4	2.6
Other	,,	12.2	18.6	17.4	15.3	16.9	18.6
Lard	,,	5.2	4.2	4.4	4.3	4.1	3.8
Vegetable Oils and Other Fats	,,	14.4	12.0	12.0	13.9	13.6	13.7
Total (Fat Content) ..	,,	115.5	99.4	96.8	101.4	104.1	103.4

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING CONSUMPTION ANNUALLY : AUSTRALIA—*continued.*

Commodity.	Unit of Quantity.	Average 1936–37 to 1938–39.	1944. (*a*)	1945. (*a*)	1946. (*a*)	1946–47. (*b*)	1947. (*b*)
Sugar and Syrups—							
Refined Sugar—							
As Sugar	'000 tons.	216.5	210.7	220.8	231.6	233.4	245.3
In manufactured products..	”	110.1	129.0	123.5	167.5	168.0	177.7
Honey	”	5.3	5.3	4.7	3.8	5.2	5.0
Syrups, Glucose	”	16.6	17.4	17.0	20.3	20.7	22.0
Total (Sugar Content) ..	”	343.9	357.6	361.4	418.0	421.7	444.1
Potatoes—							
White	”	318.5	334.0	359.3	408.6	445.8	445.8
Sweet	”	7.4	9.8	7.8	5.5	5.6	5.6
Total	”	325.9	343.8	367.1	414.1	451.4	451.4
Pulse and Nuts—							
Dried Pulse	”	4.5	5.5	7.1	9.5	10.1	8.9
Peanuts (weight without shell)	”	2.8	1.3	1.8	6.5	6.5	10.7
Edible Tree Nuts (weight without shell)	”	2.6	1.0	1.3	2.3	3.0	3.8
Cocoa (Raw Beans)	”	6.3	9.8	10.0	13.6	13.2	13.2
Total	”	16.2	17.6	20.2	31.9	32.8	36.6
Tomatoes and Fruit—							
Tomatoes (*e*)	”	(*f*)48.0	(*f*)47.6	66.0	82.1	101.5	101.5
Citrus Fruit (*e*)	”	97.8	67.6	84.6	107.5	114.5	114.5
Other Fresh Fruit	”	264.0	302.0	298.7	310.2	284.5	284.5
Jams	”	35.1	36.6	37.6	49.4	40.7	39.4
Dried Fruit	”	32.2	27.2	25.3	28.2	29.0	32.4
Canned Fruit	”	31.9	19.4	19.6	26.0	28.3	26.1
Total (Fresh Fruit Equivalent)	”	578.2	556.2	581.1	653.1	655.4	666.7
Vegetables—							
Leafy, Green and Yellow Vegetables	”	(*g*)	176.2	181.4	192.8	180.5	180.5
Other Fresh Vegetables ..	”	(*g*)	263.1	282.9	291.1	267.0	267.0
Canned Vegetables	”	(*g*)	(*h*)	3.1	9.4	11.5	14.3
Total	”	(*g*)	439.3	467.4	493.3	459.0	461.8
Grain Products—							
Flour—							
White	”	574.0	603.0	582.1	625.5	645.2	649.6
Wheatmeal for baking ..	”			36.9	35.7	34.8	33.7
Breakfast Foods (*i*)	”	27.8	34.3	32.4	36.1	35.9	32.9
Rice (Milled)	”	12.2	3.7	2.5	3.0	3.6	3.7
Tapioca, Sago, etc. ..	”	3.7	..	..	..	1.1	4.6
Pearl Barley	”	3.0	2.8	2.0	3.0	2.5	2.3
Barley Meal and Rycena ..	”	..	0.7	0.8	0.7	1.1	4.0
Edible Starch (Cornflour) ..	”	6.5	4.9	3.7	3.8	4.3	4.1
Total	”	627.2	649.4	660.4	707.8	728.5	734.9
Beverages—							
Tea	”	21.1	18.0	19.5	22.1	22.5	22.2
Coffee	”	2.0	2.9	3.1	3.5	3.8	3.8
Beer (*j*)	mil. gals.	77.9	94.3	94.6	99.7	119.5	119.5
Wine (*j*)	”	4.2	8.5	8.7	7.1	8.4	8.4

(*a*) Excludes consumption by Armed Services. (*b*) Subject to revision. (*c*) Included under fresh meat at its carcass weight. (*d*) In terms of weight of shell eggs. (*e*) Includes fresh equivalent of manufactured products. (*f*) Probably understated due to absence of complete data. (*g*) Not available. (*h*) Included under fresh vegetables at its fresh equivalent. (*i*) Excludes breakfast foods from maize and rice. (*j*) Figures for 1944 and later years are for years ended June of year shown and include consumption by the Armed Services.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING CONSUMPTION ANNUALLY PER HEAD OF POPULATION : AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936–37 to 1938–39.	1944. (a)	1945. (a)	1946. (a)	1946–47. (b)	1947. (b)
Milk and Milk Products—							
Fluid Whole Milk	gallon	23.4	27.9	27.5	28.5	28.1	28.4
Fresh Cream	lb.	6.4	1.2	1.2	1.8	2.4	2.0
Condensed Milk (Sweetened and Unsweetened) ..	,,	3.2	2.8	3.5	3.0	2.9	4.4
Concentrated Whole Milk ..	,,	0.4	1.9	1.6	3.7	2.7	3.1
Powdered Milk—							
Full Cream	,,	2.6	2.5	3.0	3.4	2.8	3.0
Skim	,,		0.4	0.4	0.5	0.6	0.7
Infants' and Invalids' Foods (including Malted Milk) ..	,,	1.0	1.1	1.3	1.6	1.5	1.4
Cheese	,,	4.4	6.1	6.0	6.3	6.1	5.3
Total (in terms of Milk Solids)	,,	39.1	44.4	44.4	47.1	45.8	46.4
Meat—							
Beef (bone-in weight) ..	,,	144.1	93.0	86.7	93.2	96.7	99.0
Mutton (bone-in weight) ..	,,	59.8	63.3	59.9	51.3	46.1	42.9
Lamb (bone-in weight) ..	,,	15.0	30.3	25.2	22.8	21.7	23.5
Pork (bone-in weight) ..	,,	10.4	6.4	4.9	5.9	6.8	5.0
Offal	,,	8.4	9.2	8.8	9.0	9.3	9.0
Canned Meat (canned weight)	,,	(c)	1.9	1.8	2.4	2.5	2.7
Bacon and Ham (cured weight)	,,	10.2	10.8	10.0	12.1	12.7	11.6
Total { in terms of carcass weight ..	,,	253.0	221.0	203.2	203.1	202.0	199.9
Total { in terms of retail weight ..	,,	179.6	156.9	144.3	144.2	143.4	141.9
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	,,	9.7	13.2	14.5	16.1	16.1	16.1
Fish—							
Fresh (edible weight) ..	,,	6.4	4.6	5.3	5.3	6.0	6.2
Shell (edible weight) ..	,,	0.7	0.3	0.4	0.4	0.4	0.4
Canned (edible weight) ..	,,	4.1	..	0.2	2.8	2.6	2.4
Total (edible weight) ..	,,	16.8	12.5	14.3	17.8	18.3	18.3
Eggs and Egg Products—							
Shell Eggs	,,	25.7	29.7	29.0	26.9	26.5	25.8
Liquid Whole Egg (d) ..	,,	0.9	1.9	3.1	2.2	2.5	2.5
Total (Shell Egg equivalent)	,,	26.6	31.6	32.1	29.1	29.0	28.3
	No.	243	289	293	266	265	259
Fats and Oils—							
Butter	lb.	32.9	27.5	26.1	25.3	25.3	24.3
Margarine—							
Table	,,	0.9	0.3	0.3	0.7	0.7	0.8
Other	,,	4.0	6.3	5.8	4.7	5.0	5.5
Lard	,,	1.7	1.4	1.5	1.3	1.2	1.1
Vegetable Oils and other Fats	,,	4.7	4.1	4.1	4.2	4.0	4.1
Total (Fat Content) ..	,,	37.6	33.8	32.3	30.9	30.9	30.6
Sugar and Syrups—							
Refined Sugar—							
As Sugar	,,	70.6	71.8	73.5	70.7	69.5	72.5
In manufactured products..	,,	35.9	44.1	41.1	51.2	50.0	52.5
Honey	,,	1.7	1.8	1.6	1.1	1.5	1.5
Syrups, Glucose	,,	5.4	5.9	5.5	6.2	6.1	6.5
Total (Sugar Content) ..	,,	112.0	121.9	120.2	127.6	125.5	131.3

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA —*continued.*

Commodity.	Unit of Quantity.	Average 1936–37 to 1938–39.	1944. (*a*)	1945. (*a*)	1946. (*a*)	1946–47. (*b*)	1947. (*b*)
Potatoes—							
White	lb.	103.8	113.7	119.6	124.9	131.7	131.7
Sweet	"	2.4	3.3	2.6	1.7	1.7	1.7
Total	"	106.2	117.0	122.2	126.6	133.4	133.4
Pulse and Nuts—							
Dried Pulse	"	1.5	1.9	2.4	2.9	3.0	2.6
Peanuts (weight without shell)	"	0.9	0.4	0.6	2.0	1.9	3.1
Edible Tree Nuts (weight without shell)	"	0.8	0.3	0.4	0.7	0.9	1.1
Cocoa (raw Beans)	"	2.1	3.3	3.3	4.1	3.9	3.9
Total	"	5.3	5.9	6.7	9.7	9.7	10.7
Tomatoes and Fruit—							
Tomatoes (*e*)	"	(*f*)15.7	(*f*)16.2	21.9	25.1	30.0	30.0
Citrus Fruit (*e*)	"	31.9	23.0	28.1	32.8	34.1	34.1
Other Fresh Fruit	"	86.1	102.9	99.4	94.7	84.1	84.1
Jams	"	11.4	12.5	12.5	15.1	12.1	11.7
Dried Fruit	"	10.4	9.3	8.4	8.6	8.6	9.6
Canned Fruit	"	10.7	6.6	6.5	7.9	8.4	7.7
Total (Fresh Fruit equivalent)	"	188.5	189.6	193.2	199.4	194.2	197.5
Vegetables—							
Leafy, Green and Yellow Vegetables	"	(*g*)	60.0	60.3	58.8	53.4	53.4
Other Fresh Vegetables	"	(*g*)	89.6	94.1	88.8	78.9	78.9
Canned Vegetables	"	(*g*)	(*h*)	1.1	2.9	3.5	4.2
Total	"	(*g*)	149.6	155.5	150.5	135.8	136.5
Grain Products—							
Flour—							
White	"	187.1	205.5	193.7	191.0	192.2	191.9
Wheatmeal for baking	"			12.3	10.9	10.3	10.0
Breakfast Foods (*i*)	"	9.0	11.7	10.8	11.0	10.7	9.7
Rice (milled)	"	4.0	1.3	0.8	0.9	1.1	1.1
Tapioca, Sago, etc.	"	1.2	..	..	..	0.5	1.3
Pearl Barley	"	1.0	1.0	0.7	0.9	0.7	0.7
Barley Meal and Rycena	"	..	0.2	0.3	0.2	0.3	1.2
Edible Starch (Cornflour)	"	2.1	1.7	1.2	1.2	1.3	1.2
Total	"	204.4	221.4	219.8	216.1	217.1	217.1
Beverages—							
Tea	"	6.9	6.1	6.5	6.7	6.7	6.6
Coffee	"	0.6	1.0	1.0	1.1	1.1	1.1
Beer (*j*)	gallon	11.3	13.0	12.9	13.4	15.9	15.9
Wine (*j*)	"	0.6	1.2	1.2	1.0	1.1	1.1

(*a*) Excludes consumption by the Armed Services. (*b*) Subject to revision. (*c*) Included with fresh meat at its carcass weight. (*d*) In terms of weight of shell eggs. (*e*) Includes fresh equivalent of manufactured products. (*f*) Probably understated due to lack of complete data. (*g*) Not available. (*h*) Included under fresh vegetables at its fresh equivalent. (*i*) Excludes breakfast foods from maize and rice. (*j*) Figures for 1944 and later years are for years ended June of year shown, and include consumption by the Armed Services.

2. **Level of Nutrient Intake.**—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1945 in comparison with the annual average for the three years 1936–37 to 1938–39. The table

has been compiled by the Nutrition Committee of the National Health and Medical Research Council, and is based on the estimates of quantity consumption per head of population shown in the preceding table.

ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION : AUSTRALIA.

(Per head per day.)

Nutrient.	Unit.	Average 1936–37 to 1938–39.	1945.(a)	1946.(a)	1946–47. (b)	1947.(b)
Calories	No.	3,114	3,174	3,216	3,204	3,236
Protein—						
Animal	gm.	58.7	53.6	54.8	54.4	54.4
Vegetable	„	30.8	34.2	34.6	34.9	35.3
Total	„	89.5	87.8	89.4	89.3	89.7
Fat	„	133.5	120.3	120.1	118.6	117.7
Carbohydrate	„	376.8	419.9	429.5	424.8	437.9
Calcium	mgm.	642	750	783	762	771
Iron	„	15.3	14.4	14.8	14.8	14.8
Vitamin A	I.U.	4,949	4,803	4,866	4,783	4,688
Ascorbic Acid	mgm.	85.6	95.6	99.0	99.5	100.0
Thiamin	„	1.4	1.4	1.5	1.5	1.5
Riboflavin	„	1.7	1.7	1.8	1.8	1.8
Niacin	„	18.2	16.2	16.6	16.6	16.7

(a) Excludes consumption by Armed Services. (b) Subject to revision.

§ 22. Marketing of Australian Primary Products.

Prior to the outbreak of war the necessity for Commonwealth marketing legislation arose principally from difficulties encountered by the various Australian primary industries in overseas markets. Legislation of this kind usually resulted from consultations held between the Commonwealth Government and producers with a view to discovering a means whereby these difficulties could best be overcome. The essential element of this legislation was the establishment of producer-controller industry boards, whose function was to control the overseas marketing of the product concerned. Agreement was reached by the Governments of the United Kingdom and the Commonwealth which enabled exports from Australia to proceed normally even before any contracts for the sale of commodities had been concluded.

On the outbreak of hostilities, the existence of statutory boards for the meat, dairy produce and fruit industries facilitated war-time organization. However, war-time conditions so dislocated the normal facilities for marketing many of our other primary products that, in the interests of producers and the community generally, it became necessary for the Commonwealth Government to organize the marketing of some commodities previously unaffected by marketing legislation. The experience already gained in marketing control enabled the Commonwealth Government to proceed quickly with the formation of committees and/or boards in the industries concerned, namely, wool, wheat, barley, potatoes, tobacco, apples and pears, hides and leather, sheep skins, rabbit skins, tallow and eggs. In the case of other commodities it was found essential to expand the controls already in existence and in some instances this involved the establishment of an authority in the industry additional to that already constituted under pre-war marketing statutes. For the greater part, these war-time authorities were set up by virtue of regulations under the National Security Act. Several of the war-time organizations set up under the National Security Act have since been superseded by permanent boards established by the Commonwealth Government to control overseas marketing.

Full details of the operations of both permanent and war-time boards and other authorities appointed to assist or control the marketing of Australian primary products are included in Chapter XIX.—Pastoral Production, Chapter XX.—Agricultural Production and Chapter XXI.—Farmyard, Dairy and Bee Products.

§ 23. Valuation of Australian Production.

1. **Net Value of Production.**—(i) *Australia.* The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally by the Conference held in 1935. The figures published below have been compiled by the State Statisticians from the best data available. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing render the results comparable as between States.

Attention is directed to the fact that the value shown in the table refers only to recorded production and excludes the building and construction industry, those industrial establishments not classified as factories, and agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used in the table :—

(*a*) " Gross value " is the value placed on recorded production at the wholesale price realized in the principal markets. (In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.)

(*b*) " Local value " is the gross production valued at the place of production and is ascertained by deducting marketing costs from the gross value. (Marketing costs include freight, cost of containers, commission and other charges incidental thereto.)

(*c*) " Net value " represents the net return to the producer after deducting from the gross value costs of marketing and of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deduction has been made for depreciation and maintenance costs. This matter is more fully dealt with in *Production Bulletin* No. 41. Part II., issued by this Bureau.

It should be noted that costs of maintenance of farm buildings and fences have not been deducted from the value of production of rural industries, as particulars are not available for all States. In addition, there is an overstatement in the net value of production for New South Wales by the inclusion of power costs in rural industries. These costs, which amounted to £1,892,000 in 1940–41, have not been ascertained in later years. The value shown for Mines and Quarries in Tasmania is understated owing to the omission of Quarries. This understatement, however, is more or less offset by the inclusion of production costs in Mining. Production costs are not available for all States in respect of Fisheries, and Local Values have been used for this industry with consequent overstatement.

Tables showing the total and per capita value of production are published, by States, for each of the ten years ended 1945–46. Except for trapping and mines and quarries, the tables on each industry will be found in the chapter dealing with that industry.

GROSS, LOCAL AND NET VALUE OF RECORDED PRODUCTION: AUSTRALIA, 1945–46.

Industry.	Gross Production valued at Principal Markets.	Local Value—Gross Production valued at place of Production.	Net Value of Production (without deduction of depreciation or maintenance).
	£	£	£
Agriculture	147,780,561	129,985,409	104,627,151
Pastoral	99,606,998	91,084,330	86,312,464
Dairying	63,224,549	60,118,273	49,539,507
Poultry	23,620,644	21,308,082	15,128,890
Bee-farming	460,113	413,081	413,081
Total Rural (*a*) ..	334,692,865	302,909,175	256,021,093
Trapping	9,077,539	8,554,300	8,554,300
Forestry	13,862,395	12,675,655	12,260,500
Fisheries	3,048,069	2,599,950	(*b*) 2,599,950
Mines and Quarries ..	32,685,028	32,290,572	26,288,226
Total Non-rural ..	58,673,031	56,120,477	49,702,976
Total All Primary	393,365,896	359,029,652	305,724,069
Factories	(*c*) 352,323,299	(*c*) 352,323,299	352,323,299
Total All Industries ..	745,689,195	711,352,951	658,047,368

(*a*) The term "Rural" is used to cover those industries ordinarily considered to be farm industries
(*b*) Local value. Production costs not available for all States. (*c*) Net Value.

(ii) *States.* The net value of production in each State is shown in the following table. The values of agricultural production and the net values per head of mean population in this section differ from those shown in Chapter XX.—Agricultural Production, pp. 895–6, owing to subsequent revisions which were received too late for incorporation in that Chapter.

NET (*a*) VALUE OF RECORDED PRODUCTION, 1945–46.

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Agriculture ..	39,345	20,327	18,731	13,781	8,099	4,344	104,627
Pastoral	34,043	18,098	18,944	6,198	6,804	2,225	86,312
Dairying ..	15,590	15,032	12,479	3,826	1,844	769	49,540
Poultry	5,887	5,666	1,172	1,251	584	569	15,129
Bee-farming ..	119	115	49	77	46	7	413
Total Rural ..	94,984	59,238	51,375	25,133	17,377	7,914	256,021
Trapping.. ..	4,142	3,174	72	307	131	728	8,554
Forestry	3,745	2,411	2,502	1,171	1,459	973	12,261
Fisheries (*b*) ..	1,046	466	437	231	203	217	2,600
Mines and Quarries	13,116	1,735	2,831	2,378	4,244	1,984	26,288
Total Non-rural..	22,049	7,786	5,842	4,087	6,037	3,902	49,703
Total All Primary	117,033	67,024	57,217	29,220	23,414	11,816	305,724
Factories.. ..	153,179	120,250	30,270	25,602	13,826	9,196	352,323
Total All Industries ..	270,212	187,274	87,487	54,822	37,240	21,012	658,047

(*a*) See letterpress on page 1214. (*b*) Local value.

NET (*a*) VALUE OF RECORDED PRODUCTION PER HEAD OF MEAN POPULATION, 1945–46.

Industry.	N.S.W.			Victoria.			Q'land.			S. Aust.			W. Aust.			Tas.			Total.		
	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
Agriculture ..	13	8	4	10	1	8	17	5	7	21	16	9	16	10	6	17	7	1	14	1	9
Pastoral ..	11	12	2	8	19	7	19	9	6	9	16	5	13	17	7	8	17	10	11	12	4
Dairying ..	5	6	4	7	9	2	11	10	3	6	1	3	3	15	3	3	1	4	6	13	4
Poultry ..	2	0	2	2	16	3	1	1	7	1	19	8	1	3	10	2	5	6	2	0	9
Bee-farming ..	0	0	9	0	1	1	0	0	11	0	2	6	0	1	11	0	0	6	0	1	1
Total Rural ..	32	7	9	29	7	9	47	7	10	39	16	7	35	9	1	31	12	3	34	9	3
Trapping	1	8	3	1	11	6	0	1	4	0	9	9	0	5	4	2	18	2	1	3	0
Forestry	1	5	6	1	3	11	2	6	2	1	17	1	2	19	6	3	17	9	1	13	0
Fisheries (*b*) ..	0	7	2	0	4	7	0	8	1	0	7	4	0	8	4	0	17	4	0	7	0
Mines and Quarries	4	9	5	0	17	3	2	12	3	3	15	4	8	13	2	7	18	7	3	10	9
Total Non-rural	7	10	4	3	17	3	5	7	10	6	9	6	12	6	4	15	11	10	6	13	9
Total All Primary	39	18	1	33	5	0	52	15	8	46	6	1	47	15	5	47	4	1	41	3	0
Factories	52	4	7	59	13	2	27	18	6	40	11	5	28	4	2	36	14	9	47	8	4
Total All Industries ..	92	2	8	92	18	2	80	14	2	86	17	6	75	19	7	83	18	10	88	11	4

(*a*) See letterpress on page 1214. (*b*) Local value.

2. **Productive Activity.**—The two tables, and comment thereon, usually published in this paragraph relative to measurement of productivity are omitted from this issue pending revision in the light of changes in age composition of the population as revealed by the Census of 1947, and of changes in age and sex composition of persons engaged in production in recent years.

§ 24. Indexes of Production.

In the tables below, indexes of price and quantity production are given for the following industrial groups, namely :—Agriculture, Pastoral, Farmyard and Dairying, Gold and Other Minerals, and for all groups combined. The method used in calculating these indexes is the fixed base weighted aggregative method. Prices for any year are obtained by dividing value of production by quantity produced in that year, and the price indexes are computed by using as fixed quantity-multipliers, for the commodities involved, the average quantities produced over the period 1923–24 to 1927–28. For the quantity indexes the fixed multipliers are weighted average prices over the same period, which are obtained by dividing the total value of any commodity for the period by the total quantity produced. Exactly the same method is used for the combined group indexes (i.e., for All Farming and Total) as for the indexes for individual groups.

PRIMARY PRODUCTION : INDEX-NUMBERS OF PRICES.

(*Base : Average* 1923–24 *to* 1927–28 = 1,000).

Year.	Agricultural.	Pastoral.	Farmyard and Dairying.	All Farming.	Minerals.		Total Primary.
					Gold.	Other, excluding Gold.	
1911 ..	695	455	597	560	973	482	558
1912 ..	652	537	664	597	973	525	595
1913 ..	641	524	633	581	973	523	580
1914 ..	1,083	591	680	774	973	514	754
1915 ..	753	784	836	782	973	578	767
1916 ..	728	879	881	827	973	674	816
1917 ..	848	960	860	906	973	846	901
1918 ..	1,008	963	950	976	973	832	964
1919–20 ..	1,489	1,010	1,144	1,196	1,170	861	1,167
1920–21 ..	1,285	949	1,452	1,145	1,289	919	1,127
1921–22 ..	981	666	1,008	829	1,215	912	840
1922–23 ..	1,025	880	1,070	960	1,075	905	957
1923–24 ..	902	1,117	1,023	1,028	1,014	931	1,020
1924–25 ..	1,050	1,101	901	1,052	1,066	1,020	1,049
1925–26 ..	1,095	902	1,026	988	973	1,041	992
1926–27 ..	976	866	1,024	929	973	1,044	939
1927–28 ..	977	1,015	1,025	1,004	973	964	1,000
1928–29 ..	884	893	1,043	914	973	933	916
1929–30 ..	829	724	990	803	973	902	813
1930–31 ..	574	571	792	608	973	852	632
1931–32 ..	634	491	712	575	1,372	692	593
1932–33 ..	600	480	636	546	1,672	640	566
1933–34 ..	597	715	625	660	1,768	638	670
1934–35 ..	662	532	674	599	1,948	643	617
1935–36 ..	710	685	742	702	2,006	686	715
1936–37 ..	840	765	794	795	1,984	742	803
1937–38 ..	751	705	865	747	1,990	820	766
1938–39 ..	677	608	905	680	2,019	705	696
1939–40 ..	675	707	911	729	2,228	736	745
1940–41 ..	760	752	876	775	2,442	813	796
1941–42 ..	778	802	919	813	2,448	889	836
1942–43 ..	896	882	1,004	907	2,395	944	925
1943–44 ..	1,006	919	1,037	968	2,395	981	984
1944–45 ..	1,237	914	1,026	1,042	2,408	1,033	1,056
1945–46 ..	1,196	922	1,060	1,038	2,452	1,128	1,060
1946–47 ..	1,350	1,237	1,122	1,257	2,466	1,324	1,275

PRIMARY PRODUCTION: INDEX-NUMBERS OF QUANTITY PRODUCTION.

(*Base : Average* 1923–24 *to* 1927–28 = 1,000).

Year.	Agricultural.	Pastoral.	Farmyard and Dairying.	All Farming.	Minerals.		Total Primary
					Gold.	Other, excluding Gold.	
1911 ..	611	938	742	794	4,172	1,176	862
1912 ..	775	859	721	808	3,906	1,265	879
1913 ..	807	970	743	878	3,707	1,332	946
1914 ..	359	948	720	709	3,451	1,172	777
1915 ..	1,199	768	570	884	3,270	1,075	925
1916 ..	971	742	701	814	2,798	962	847
1917 ..	805	750	814	779	2,446	936	810
1918 ..	635	849	796	767	2,138	1,000	801
1919–20 ..	527	938	737	765	1,794	717	771
1920–21 ..	1,046	763	809	868	1,585	785	868
1921–22 ..	944	877	955	913	1,273	783	906
1922–23 ..	896	934	872	911	1,269	873	912
1923–24 ..	971	837	886	891	1,196	974	901
1924–25 ..	1,151	977	1,091	1,055	1,135	1,003	1,052
1925–26 ..	880	1,033	1,009	976	939	1,008	979
1926–27 ..	1,090	1,093	971	1,072	876	991	1,063
1927–28 ..	908	1,060	1,043	1,005	854	1,025	1,005
1928–29 ..	1,093	1,133	1,068	1,109	769	899	1,087
1929–30 ..	952	1,067	1,071	1,028	717	852	1,010
1930–31 ..	1,346	1,035	1,175	1,164	784	810	1,130
1931–32 ..	1,211	1,129	1,265	1,179	1,000	665	1,134
1932–33 ..	1,334	1,212	1,350	1,276	1,199	774	1,233
1933–34 ..	1,228	1,160	1,423	1,226	1,394	828	1,194
1934–35 ..	1,066	1,200	1,485	1,200	1,489	883	1,176
1935–36 ..	1,096	1,166	1,415	1,182	1,529	984	1,169
1936–37 ..	1,158	1,206	1,359	1,214	1,981	1,050	1,209
1937–38 ..	1,313	1,260	1,432	1,306	2,320	1,130	1,302
1938–39 ..	1,154	1,211	1,497	1,237	2,674	1,173	1,247
1939–40 ..	1,495	1,322	1,554	1,419	2,764	1,283	1,421
1940–41 ..	824	1,336	1,516	1,189	2,761	1,256	1,212
1941–42 ..	1,276	1,379	1,540	1,370	2,514	1,312	1,377
1942–43 ..	1,197	1,379	1,587	1,350	1,938	1,290	1,351
1943–44 ..	1,005	1,393	1,502	1,277	1,262	1,193	1,270
1944–45 ..	703	1,251	1,521	1,107	1,103	1,165	1,111
1945–46 ..	1,162	1,107	1,564	1,200	1,104	1,035	1,185
1946–47 ..	947	1,176	1,572	1,162	1,385	1,110	1,160

§ 25. League of Nations.

In issue No. 35 and earlier issues of the Official Year Book information was given concerning the League of Nations. The dissolution of the League and the transfer of certain of its functions to the new body, the United Nations, are now being effected (*see* § 26 following).

§ 26. The United Nations.

1. **General.**—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, are now being effected.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on the 1st November, 1945. The Charter has been ratified by 58 States in all: Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Burma, Byelorussia, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Iran, Iraq, Lebanon, Liberia, Luxembourg, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, Philippine Commonwealth, Poland, Saudi Arabia, Siam, Sweden, Syria, Turkey, Ukraine, Union of South Africa, Union of Soviet Socialist Republics, United Kingdom, United States of America, Uruguay, Venezuela, Yemen, Yugoslavia.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco, United States of America, from 25th April to 26th June, 1945.

The Australian delegates to the Conference were the Rt. Hon. F. M. Forde, M.P., and the Rt. Hon. H. V. Evatt, K.C., M.P.

At San Francisco an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946. At this meeting the Assembly carried out the elections to the other major organs of the United Nations. These major organs are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat.

2. **General Assembly.**—This is the forum of the United Nations. In it each member state is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. It has power to discuss any matter within the scope of the Charter and to make recommendations upon it; an exception to this is provided by disputes which are before the Security Council. The Assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.

3. **The Security Council.**—This has the primary responsibility for the maintenance of international peace and security. It is composed of certain permanent members, namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two year periods of office. On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters, decisions can only be made on the affirmative vote of seven members, including the concurring votes of all the permanent members However, the powers which are parties to a dispute for peaceful settlement do not vote

At the first election, three non-permanent seats were filled for one year only. Member states elected for this period were Egypt, Mexico and the Netherlands. Australia, Brazil and Poland were elected for two-year periods.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council. In the event of measures other than armed force failing to remove a threat to peace, plans for the application of armed force are made by the Security Council with the assistance of this committee. The forces required are to be drawn from the member states as a result of particular agreements between those states and the Security Council.

4. **The Economic and Social Council.**—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make studies and recommendations upon educational, economic, social, cultural, health and related matters. It may set up commissions for these subjects and establish working relationships with relevant international agencies.

The first election staggered the periods of office, and resulted as follows :—Canada, Chile, China, Belgium, France and Peru were elected for three year terms ; Cuba, Czechoslovakia, India, Norway, United Kingdom and Union of Soviet Socialist Republics, for two year terms ; and Colombia, Greece, Lebanon, Ukraine, the United States and Yugoslavia, for one year terms.

Australia was elected at the Second Annual Session of the General Assembly to ESC for three years, commencing 1st January, 1948.

5. **The Trusteeship Council.**—The Charter states that the political, social, cultural and economic advancement of the non-self-governing territories is a sacred trust. In addition, a Trusteeship Council is to be set up composed of those members administering trust territories together with a number of members without trust territories. Territories which may be placed under trusteeship in accord with individual trusteeship agreements are those now held under mandate, those detached from enemy states of the second World War and those dependent territories placed under the system by the states responsible for their administration. The Council cannot be set up until the conclusion of trusteeship agreements. Australia is automatically a member of the Trusteeship Council, as an administering Power.

The Council has among its duties the consideration of annual reports submitted by the trustee state, the carrying out of periodic inspections by agreement with it, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

6. **The International Court of Justice.**—This consists of fifteen judges, no two of whom may be nationals of the same state. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. States may declare that they recognize as compulsory its jurisdiction in all disputes of an international legal character.

The judges first elected are :—Nine year term : Professor Jules Basdevant (France), Dr. J. G. Guerrero (El Salvador), Sir Arnold McNair (United Kingdom), Dr. Alejandro Alvarez (Chile), and Dr. J. P. de Barros Azevedo (Brazil) ; Six year term : Dr. Charles de Visscher (Belgium), Professor S. B. Krylov (Union of Soviet Socialist Republics), Lic. Isidro Fabela Alfaro (Mexico), the Hon. Green H. Hackworth (United States of America), and Dr. Juris. H. Klaestad (Norway) ; Three year term : Dr. Hsu Mo (China), H. E. Abdel Hamid Badawi Pasha (Egypt), Mr. J. E. Read, K.C. (Canada), Dr. Milovan Zoricic (Yugoslavia), and M. Bohdan Winiarski (Poland). At the Second Annual Session of the Assembly the five retiring judges were re-elected.

7. **The Secretariat.**—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. M. Trygve Lie (Norway) was appointed first Secretary-General.

§ 27. Diplomatic and other Representatives Overseas and in Australia.

The following statement shows the various diplomatic and other representatives overseas and in Australia as at 28th February, 1949. Full details of British and foreign representation in Australia—diplomatic and consular—may be obtained from a publication issued by the Department of External Affairs, Canberra, entitled " Diplomatic and Consular List, including British Commonwealth Representatives and Trade Commissioners in Australia ".

AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

His Majesty's Ambassador Extraordinary and Plenipotentiary to—

United States of America, Washington, D.C.—
The Hon. N. J. O. Makin.
China, Nanking—
F. K. Officer, O.B.E., M.C.
France, Paris—
Lieut.-Colonel W. R. Hodgson, O.B.E.
Union of Soviet Socialist Republics, Moscow—
A. S. Watt.

His Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to—

Brazil, Rio de Janeiro—
Vacant.
First Secretary, W. T. Doig (Chargé d'Affaires), *ad interim*.
Chile, Santiago—
Vacant.
First Secretary, Dr. J. S. Cumpston (Chargé d'Affaires), *ad interim*.
The Netherlands, The Hague—
Vacant.
First Secretary, J. P. Quinn (Chargé d'Affaires), *ad interim*.

High Commissioners for Australia in—

United Kingdom, London—
Rt. Hon. J. A. Beasley.
Canada, Ottawa—
Rt. Hon. F. M. Forde.
Ceylon, Colombo—
Hon. C. W. Frost.
Eire, Dublin—
W. J. Dignam, K.C.
India, New Delhi—
H. R. Gollan, D.S.O., M.C.
New Zealand, Wellington—
A. R. Cutler, V.C.
Pakistan, Karachi—
Vacant.
Official Secretary, J. M. McMillan.
South Africa, Pretoria—
A. T. Stirling, O.B.E.

Australian Military Mission in—

Germany, Berlin—
Head, Major-General F. G. Galleghan, D.S.O., O.B.E., E.D.

Australian Mission—

Japan, Tokyo—
Head, P. Shaw.
United States of America, United Nations—
Minister, J. D. L. Hood.

Australian Commissioner for—

Malaya, Singapore—
C. Massey.

Consuls-General—

United States of America, New York—
C. V. Kellway.
United States of America, San Francisco—
Lieut.-General E. K. Smart, D.S.O., M.C.
Siam, Bangkok—
A. J. Eastman.
The Philippines, Manila—
J. K. Waller.
The Netherlands East Indies, Batavia—
Charles Eaton, O.B.E., A.F.C.

Consuls—

New Caledonia, Noumea—
H. S. Barnett.
Portuguese Timor, Dili—
H. D. White.

Trade Commissioners for the Commonwealth of Australia—

United Kingdom—
C. E. Critchley, M.B.E., London.
Canada—
C. J. Carne, Ottawa.
F. R. Gullick, Vancouver.
China—
H. Wrigley, Hong Kong.
Egypt—
C. L. Steele, Cairo.
India—
A. G. Hard, Calcutta.
S. D. Shubart, Bombay.
Malaya—
J. Payne, Singapore.
New Zealand—
Vacant.
South Africa—
G. R. B. Patterson, Johannesburg.
United States of America—
Trade Commissioners—
R. R. Ellen, New York.
S. F. Lynch, San Francisco.
Commercial Counsellor—
J. U. Garside, Washington, D.C.
Japan—
H. C. Menzies, Commercial Counsellor, Tokyo.
France—
H. Sullivan, Commercial Counsellor, Paris.

DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

Belgium—Envoy Extraordinary and Minister Plenipotentiary, Sydney—
His Excellency Monsieur Paul B. Verstraeten.
Brazil—Envoy Extraordinary and Minister Plenipotentiary, Canberra—
Vacant. (Chargé d'Affaires *ad interim* : Dr. M. Santos.)
Canada—High Commissioner, Canberra—
His Excellency Mr. K. A. Greene, O.B.E.
Ceylon—High Commissioner, Canberra—
His Excellency Mr. J. A. Martensz.
China—Ambassador Extraordinary and Plenipotentiary, Canberra—
His Excellency Dr. Kan Nai-kuang.
Denmark—Envoy Extraordinary and Minister Plenipotentiary, Canberra—
His Excellency Mr. Chr. M. Rottböll.

DIPLOMATIC REPRESENTATIVES IN AUSTRALIA—*continued.*

France—Envoy Extraordinary and Minister Plenipotentiary, Canberra—
His Excellency Monsieur Pierre Augé. (In charge of Embassy of the Republic of France).

India—High Commissioner, Canberra—
His Excellency Lieut.-Colonel Daya Singh Bedi.

Ireland—Representative of Ireland in Australia, Canberra—
His Excellency Dr. the Hon. T. J. Kiernan (personal rank of Minister).

Italy—Envoy Extraordinary and Minister Plenipotentiary, Sydney—
His Excellency Don Giulio del Balzo.

Malta—Commissioner, Melbourne—
Captain Henry C. Curmi, O.B.E.

Netherlands—Envoy Extraordinary and Minister Plenipotentiary, Canberra.
His Excellency Mr. P. E. Teppema, Kt. N.L., O.O.N.

New Zealand—High Commissioner, Canberra—
His Excellency Mr. J. G. Barclay.

Norway—Envoy Extraordinary and Minister Plenipotentiary, Sydney—
His Excellency Mr. L. J. H. Jorstad.

Sweden—Envoy Extraordinary and Minister Plenipotentiary, Sydney—
His Excellency Mr. O. C. G. Lundquist.

Union of Soviet Socialist Republics—Ambassador Extraordinary and Plenipotentiary, Canberra—
His Excellency Mr. N. M. Lifanov.

United Kingdom of Great Britain and Northern Ireland—High Commissioner, Canberra—
His Excellency the Rt. Hon. E. J. Williams.

United States of America—Ambassador Extraordinary and Plenipotentiary Canberra—
His Excellency Mr. Myron M. Cowen.

TRADE COMMISSIONERS OF OVERSEAS GOVERNMENTS IN AUSTRALIA.

Canada—
Senior Canadian Government Trade Commissioner, Sydney—
C. M. Croft.
Canadian Government Trade Commissioner, Melbourne—
F. W. Fraser.

India—
Indian Government Trade Commissioner, Sydney—
G. P. Pillai.

Indonesia—
Trade Commissioner, Melbourne—
J. Van der Noordaa.

Pakistan—
Trade Commissioner, Sydney—
K. H. Rahman.

New Zealand—
Senior New Zealand Government Trade Commissioner, Sydney—
W. Taylor.
New Zealand Government Trade Commissioner, Melbourne—
B. R. Rae, M.B.E.

United Kingdom—
His Majesty's Senior Trade Commissioner, Canberra—
J. B. Greaves, O.B.E.
His Majesty's Trade Commissioners, Sydney—
J. R. Adams.
A. Hartland.
K. H. Henderson.
His Majesty's Trade Commissioners, Melbourne—
H. F. Gurney, O.B.E.
W. G. Lamarque.
His Majesty's Trade Commissioner, Brisbane—
S. A. Deacon, O.B.E.

§ 28. Consular Representatives of Foreign Countries in Australia.

The following tabular statement shows the number of consular representatives of foreign countries in each State at 1st January, 1949 :—

CONSULAR REPRESENTATIVES OF FOREIGN COUNTRIES IN AUSTRALIA.

Country.	Number of Consular Representatives in—						
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total Aust.
Argentina	2	..	..	..	..	..	2
Belgium	2	1	1	1	1	..	6
Bolivia	..	..	1	..	..	..	1
Brazil	..	1	..	..	..	..	1
Chile	2	1	..	..	..	..	3
China	6	3	1	..	..	..	10
Colombia	1	..	..	..	..	..	1
Costa Rica	1	..	..	..	..	..	1
Czechoslovakia	1	2	1	..	1	..	5
Denmark	1	1	2	1	1	1	7
Dominican Republic	1	..	..	1	..	..	2
Ecuador	1	..	1	..	..	..	2
France	5	2	1	1	1	1	11
Greece	2	1	1	1	3	1	9
Haiti	1	1	..	..	..	..	2
Honduras	2	..	..	..	..	..	2
Latvia	1	1	1		..	..	3
Lebanon	1	..	..	..	..	..	1
Liberia	..	..	..	1	..	..	1
Netherlands	4	1	3	1	1	1	(a) 12
Norway	5	1	2	1	3	2	14
Panama	2	1	2	..	..	..	5
Paraguay	1	..	..	..	1	..	2
Peru	..	1	..	1	..	..	2
Philippines	3	..	..	..	..	..	3
Portugal	2	1	..	1	1	..	5
Salvador	..	1	..	..	..	..	1
Spain	..	1	..	..	..	..	1
Sweden	3	1	3	3	1	1	12
Switzerland	2	2	1	..	..	..	5
United States of America	10	6	1	3	1	..	21
Uruguay	1	1	..	..	..	..	2
Yugoslavia	3	1	..	..	..	..	4
Total	66	32	22	16	15	7	*a*159

(*a*) Includes a Consul for the Netherlands in the Northern Territory.

Particulars of the names and addresses of the various consular representatives, with their rank and year of appointment, are contained in the publication issued by the Department of External Affairs, Canberra, entitled "Diplomatic and Consular List including British Commonwealth Representatives and Trade Commissioners in Australia."

CHAPTER XXIX.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. General.

Development of Australian Statistics.—(i) *General.* An outline of the history and development of statistics in Australia is published in Official Year Book No. 19 (*see* p. 988) and previous issues, particular reference being made to the Crown Colony Blue Books, Statistical Registers, Prominent State Statisticians, Statistical Conferences, the Foundation of the Federal Bureau, and Uniformity of Statistical Control. It is not proposed to repeat this information in this issue.

(ii) *Present Organization.* The organization for the collection, tabulation, etc., of statistical data as between the State and Commonwealth Statistical Bureaux, and State and Commonwealth Government Departments, is described in Official Year Book No. 19, p. 990. Limits of space preclude its repetition in this issue.

§ 2. Statistical Publications of Australia.

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely :—(1) Commonwealth publications dealing both individually and collectively with the several States of Australia ; and (2) State publications dealing with individual States only. Besides these, there are many other circulars, press notices, etc., issued regularly which, though not wholly statistical, necessarily contain a considerable amount of statistical information.

2. **Commonwealth Publications.**—Commonwealth publications may be grouped under two heads, namely :—(i) Publications issued by the Commonwealth Statistician ; and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration to May, 1949 :—

Australian Life Tables, 1901–1910. *Australian Joint Life Tables*, 1901–1910.
Australian Life Tables, 1920–1922.
Australian Life Tables, 1932–1934. *Australian Joint Life Tables*, 1932–1934.
Australian Primary Industries.—Report prepared for the Empire Producers Conference, Sydney, March, 1938.
Census (1911) *Results.*—Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix "Mathematical Theory of Population."
Census (1921) *Results.*—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II.
NOTE.—Part XXVII., Life Tables.
Census (1933) *Results.*—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with Statistician's Report and Australian Life Tables 1932–34, Vol. III.
Census (1947) *Results.*—Bulletins, Nos. 1 to 16. For details *see* back page.
Crop Summary.—Annually, 1943–44 to 1947–48.
Dairying Summary.—Monthly ; first issue, September, 1937.
Finance.—Bulletins, 1907 to 1916–17 annually ; 1917–18 and 1918–19 (one vol.) ; 1919–20 and 1920–21 (one vol.) ; 1922–23 to 1947–48 annually.
Food Production and the Consumption of Foodstuffs and Nutrients in Australia.—Half-yearly, 1946–47, 1947 and 1947–48.
Fruit Summary.—Annually, 1944–45 to 1947–48.
Labour and Industrial Statistics.—Memoranda and Reports, various, to 1913.
Labour Report.—Annually, 1913 to 1947.

Live-stock Summary.—Annually, 1943 to 1948.

Local Government in Australia.—July, 1919.

Monthly Review of Business Statistics.—First issue, October, 1937.

Occupation Survey (1945) *Results.*—Detailed tables.

Official Year Book of the Commonwealth of Australia.—Annually, 1907 to present issue (1946 and 1947).

Oversea Trade.—Bulletins, annually, 1906 to 1946–47.

Pocket Compendium of Australian Statistics (formerly Statistical Digest).—1913, 1914, 1916, and 1918 to 1948 annually.

Population and Vital Statistics.—Bulletins and Reports, various, 1906–1910. *Demography,* 1911 to 1946 annually.

Production.—Bulletin, annually, 1906 to 1945–46. From 1936–37 issued in two parts: Part I. Secondary Industries; Part II. Primary Industries and Total Recorded Production.

Professional Papers.—Various. A full list appears in Official Year Book No. 13, p. 3.

Quarterly Summary of Australian Statistics.—First issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins Nos 1 to 69).

Social Insurance.—Report to the Hon. the Minister of Trade and Customs, 1910.

Social Statistics.—Bulletins, 1907 to 1915 annually, and 1918.

Superannuation for the Commonwealth Public Service.—Report to the Hon. the Minister for Home Affairs, 1910.

Transport and Communication.—Bulletins, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1946–47 annually.

Vegetable Summary.—Annually, 1942–43 to 1947–48.

Wages and Prices.—January, 1932.

Wealth.—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.

Wheat Summary.—Periodically; first issue, July, 1936.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers.* Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the Official Year Books up to No. 15, but limits of space preclude the incorporation of this information in the present volume.

3. **State Publications.**—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

(*a*) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Pocket Year Book (annual); Statistical Bulletin (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); Monthly Summary of Business Statistics.

(*b*) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year Book (annual); Statistical Abstracts (quarterly to 1917, then discontinued to December, 1946).

(*c*) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual to 1936, then discontinued); the Queensland Year Book (annual 1937 to 1941, then discontinued to 1945).

(*d*) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book (annual); Quarterly Summary of Statistics.

(*e*) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual).

(*f*) Tasmania—Statistical Register (annual); Pocket Year Book (annual); Monthly Review of Business Statistics.

§ 3. Select List of Representative Works Dealing with Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

Under each heading a list is first given of the principal standard books which are still in print. This is followed by lists of selected books published during the current period and of official publications, excluding annual reports, of the same period. In the present list the period covered is 1st January, 1946 to 31st December, 1947. A few books which, though published earlier, were received after the compilation of the last issue are also included.

Technical works on Law, Medicine and the pure sciences are excluded.

Where known, the retail price in the country of publication is given, but this is subject to fluctuation.

A copy of each of the works mentioned is preserved in the Library and access thereto may be had by any Commonwealth official or other authorized person.

The Library also publishes an annual catalogue of Australian publications, official papers and books on Australia published overseas. Copies of this are obtainable from the Government Printer at a price of 2s.

General and Descriptive.

AUSTRALIAN ENCYLOPAEDIA, THE: *editors*, A. W. Jose, H. J. Carter and T. G. Tucker: 3rd ed. 2 v (Angus & Robertson, 55s.) Sydney, 1926–27 (o.p., but new ed. in preparation).

AUSTRALIAN NATIONAL PUBLICITY ASSOCIATION. Australia: official handbook. (The Association, 3s. 6d.) Melbourne, 1947.

MADIGAN, C. T. Central Australia. 2nd ed. (Oxford University Press, 15s.) Melbourne, 1944.

OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA: Nos. 1 to date. (Government Printer, 5s. *per issue.*) Canberra, 1908, to date.

TAYLOR, T. G. Australia: a study of warm environments and their effect on British settlement. (Methuen, 21s.) London, 1940 (o.p., but new ed. printing).

WALKABOUT: Australia and the South Seas. (Australian National Publicity Association, 12s. *per annum.*) Melbourne, 1934 to date.

WOOD, T. Cobbers: a personal record of a journey from Essex, in England, to Australia. (Oxford University Press, 6s. 6d.) Melbourne, 1943.

RECENT PUBLICATIONS.

AUSTRALIAN AND NEW ZEALAND ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Handbook of Western Australia prepared for the use of members of the Association. (The Association). Perth, 1947.

AUSTRALIAN NATIONAL PUBLICITY ASSOCIATION. Australian cavalcade: [pictorial]. (The Association, 2s. 6d.) Melbourne, 1947. Consists mainly of photographs with descriptive notes.

BARNARD, Marjorie F. The Sydney Book: drawings by Sydney Ure Smith. (Ure Smith, 5s. 6d.) Sydney, 1947.

BARRETT, C. L. The sunlit land: wanderings in Queensland. (Cassell, 16s.) Melbourne, 1947.

BIRTLES, Dora E. Australia in colour: ed. by S. Ure Smith. (John Sands, 5s.) Sydney, 1946. Reproduction of landscapes by Australian artists with a descriptive article by Dora Birtles.

CLUNE, F. P. Roaming around Australia. (Hawthorn Press, 12s. 6d.) Melbourne, 1947.

DENNING, W. E. The road to Canberra: the story of a highway. (Australasian Publishing Co., 10s. 6d.) Sydney, 1947.

GRATTAN, C. H. Introducing Australia: revised ed. (Day, $5.00.) New York, 1947.

GRATTAN, C. H., *ed.* Australia: [chapters by K. H. Bailey and others.] (California University Press, $5.00.) Berkeley, 1947.

HARNEY, W. E. North of 23°: ramblings in Northern Australia. (Australasian Publishing Co., 9s. 6d.) Sydney, 1946.

HURLEY, P. J. From Kosciusko to the sea: a journey along the River Murray. (Dymock's, 15s.) Sydney, 1946.

IDRIESS, I. L. In crocodile land: wandering in Northern Australia. (Angus & Robertson, 10s. 6d.) Sydney, 1946.

MADIGAN, C. T. Crossing the dead heart. (Georgian House, 12s. 6d.) Melbourne, 1946.

MORRISON, P. C., *ed.* Melbourne's garden: a descriptive and pictorial record of the Botanic Gardens, Melbourne. (Melbourne University Press, 21s.) Melbourne, 1947.

TENNANT, G. J. *and* HAY, W. O., *comp.* Displaying Australia. (Australia Story Trust printed by Manz Corporation, Chicago, 36s.) Sydney, 1945. Photographs illustrating many phases of Australian life.

ZIEGLER, O. L., *ed.* This is Australia. (Editor, 37s. 6d.) Sydney, 1947.

Territories Outside Australia.

AUSTRALIA—*Committee . . . [on] the possibility of establishing a combined administration of the territories of Papua and New Guinea, etc.* Report. (Government Printer, 3s.) Canberra, 1939.

AUSTRALIA—*External Affairs, Department of* Handbook and index to accompany a map of Antarctica produced by the Department of the Interior, 1939: by E. P. Bayliss and J. S. Cumpston. (Department of External Affairs, 2s. 6d.) Canberra, 1940.

FORTUNE, R. F. Manus religion. (Oxford University Press, 13s. 6d.) Oxford, 1936.

MALINOWSKI, B. Coral gardens and their magic: a study of the methods of tilling the soil and of agricultural rites in the Trobriand Islands: 2 v. (Allen & Unwin, 42s.) London, 1935.

Territories Outside Australia—*continued.*

MEAD, M. From the South Seas: studies of adolescence and sex in primitive societies. 3 v. in 1. (Morrow, $4.) New York, 1939.
OFFICIAL HANDBOOK OF NEW GUINEA. (External Territories Department, 7s. 6d.) Canberra, 1937. (Re-issued 1943 with supplements.)
REED, S. W. The making of modern New Guinea: with special reference to culture contact in the Mandated Territory. (American Philosophical Society and Institute of Pacific relations, $3.) Philadelphia, 1943.
WHITING, J. W. M. Becoming a Kwoma: teaching and learning in a New Guinea tribe. (Yale University Press, $2.75.) New Haven, 1941.
WILLIAMS, F. E. Orokaiva magic. (Oxford University Press, 12s. 6d.) Oxford, 1928.
Orokaiva society. (Oxford University Press, 25s.) Oxford, 1930.
Papuans of the Trans-Fly. (Oxford University Press, 30s.) Oxford, 1936.
See also the annual reports of the Administrators of the various Territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in *Oceania.*

RECENT PUBLICATIONS.

LASERON, C. F. South with Mawson: reminiscences of the Australasian Antarctic Expedition, 1911–1914. (Australasian Publishing Co., 12s. 6d.) Sydney, 1947.

History.

CAMBRIDGE HISTORY OF THE BRITISH EMPIRE, v. 7, pt. 1: Australia. (Cambridge University Press, 35s.) Cambridge, 1933.
FITZPATRICK, B. C. British imperialism and Australia, 1783–1833: an economic history of Australasia. (Allen & Unwin, 18s.) London, 1930. (New ed. printing.)
HANCOCK, William Keith. Australia. (Australasian Publishing Co., 1s. 11d.) Sydney, 1945. (First published in Great Britain in 1930.)
HISTORICAL RECORDS OF AUSTRALIA: *ed.* J. F. Watson (in progress). (Commonwealth Parliament Library Committee, Canberra, 12s. 6d. *per v.*) Sydney, 1914 to date.
(34 v. have so far appeared. Publication has been suspended since 1925.)
HISTORICAL STUDIES: Australia and New Zealand. (Melbourne University Press, 10s. *per annum.*) Melbourne, 1940 to date.
SHANN, E. O. G. An economic history of Australia. (Georgian House, 18s.) Melbourne, 1948.

RECENT PUBLICATIONS.

FITZPATRICK, B. C. The Australian people, 1788–1945. (Melbourne University Press, 12s. 6d.) Melbourne, 1946.
GOLDSMITH, F. H. Treasure lies buried here. (Pitman, 10s.) Perth, 1946.
MURTAGH, J. G. Australia: the Catholic chapter. (Sheed & Ward, $3.00.) New York, 1946.
NORMAN, L. Sea wolves and bandits: sealing, whaling, smuggling and piracy, wild men of Van Diemen's Land . . . with a chronology of curious and interesting facts relating to old Van Diemen's Land, and (from 1856) to Tasmania. (J. Walch & Sons.) Hobart, 1946.
PORTUS, *Rev.* G. V. Britain and Australia. (Longmans, Green, 1s. 3d.) London, 1946. (Longman's pamphlets on the British Commonwealth.)
RAFFAELLO, C. The Eureka Stockade: the consequence of some pirates wanting on quarter deck a rebellion: introd. by Brian Fitzpatrick. (Dolphin Publications, 4s.) Melbourne, [1947]. (First published in Melbourne in 1855.)

Military and Naval History.

AUSTRALIA—*Army—Public relations directorate.* The Australian army at war: an official record of service in two hemispheres, 1939–1945. (The Directorate.) Melbourne, 1947.
OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914–18: *editor,* C. E. W. Bean. 12 v. (Australian War Memorial, 21s. *per v.* V. 8, 10, 11: 18s.) Canberra, 1921–42.
OFFICIAL HISTORY OF THE AUSTRALIAN ARMY MEDICAL SERVICES IN THE WAR OF 1914–18: *editor,* Col. A. G. Butler. 3 v. (Australian War Memorial, 21s. *per v.*) Canberra, 1930–43.

RECENT PUBLICATIONS.

Official—

BEAN, C. E. W. Anzac to Amiens: a shorter history of the Australian fighting services in the first world war. (Australian War Memorial, 25s.) Canberra, 1946.

Other—

BULCOCK, R. Of death but once. (Cheshire, 10s. 6d.) Melbourne, 1947.
FELDT, E. A., *commander.* The coast watchers. (Oxford University Press, 17s. 6d.) Melbourne, 1946.
HUGHES, W. S. KENT. Slaves of the Samurai: an Australian odyssey, which gives an account of the life and thoughts of a slave of the Samurai, during his three years and seven months as a prisoner of war in the hands of the Japanese. (Oxford University Press, 15s.) Melbourne, 1946.
JOHNSON, F., *editor.* R.A.A.F. over Europe: prepared by members of R.A.A.F. overseas headquarters, London. (Eyre & Spottiswoode, 12s. 6d.) London, 1946.
RHYS, L. My ship is so small. (Georgian House, 9s.) Melbourne, 1946.
RIVETT, R. D. Behind bamboo: an inside story of the Japanese prison camps. (Angus & Robertson, 12s. 6d.) Sydney, 1946 (o.p.).
ROSS, W. H. "Stormy petrel": the life story of H.M.A.S. *Sydney.* (Paterson's Printing Press, 10s. 6d.) Perth, 1946.
SUMMONS, W. I. Twice their prisoner. (Oxford University Press, 12s. 6d.) Melbourne, 1946.

Biography.

Biographical Handbook and Record of Elections for the Parliament of the Commonwealth (Commonwealth Parliament Library Committee, 10s. 6d.) Canberra, 1945. (A new issue is produced for each Federal Parliament.)

Who's Who in Australia: 13th ed. by A. H. Chisholm. (Herald Press, 31s. 6d.) Melbourne, 1947.

RECENT PUBLICATIONS.

Chisholm, A. H. The making of a sentimental bloke: a sketch of the remarkable career of C. J. Dennis. (Georgian House, 10s. 6s.) Melbourne, 1946.

Chisholm, A. R. Christopher Brennan: the man and his poetry. (Angus & Robertson, 5s.) Sydney, 1946.

Ellis, M. H. Lachlan Macquarie: his life, adventures and times. (Dymock's, 42s.) Sydney, 1947.

Grimwade, R. Flinders Lane: recollections of Alfred Felton. (Melbourne University Press, 10s. 6d.) Melbourne, 1947.

Holman, Ada. Memoirs of a Premier's wife. (Angus & Robertson, 12s. 6d.) Sydney, 1947.

Hughes, *Rt. Hon.* W. M. Crusts and crusades: tales of bygone days. (Angus & Robertson, 8s. 6d.) Sydney, 1947.

McLaurin, M. D. Sir Henry: a biographical sketch of Sir Henry Parkes, G.C.M.G. (Whitcombe & Tombs, 9s. 6d.) Sydney, 1947.

Turnbull, C. Eureka: the story of Peter Lalor. (Hawthorn Press, 8s. 6d.) Melbourne, 1946.

Constitution and Administration.*

Australia—*Laws, Statutes, etc.* The acts of the Parliament of the Commonwealth of Australia passed from 1901 to 1935 and in force on 1st January, 1936; to which is prefixed the Commonwealth of Australia constitution act. 4 v. and supplements. (Government Printer, £6 6s., supplements 10s. *per annum*.) Canberra, 1936.

Australia—*Prime Minister's Department.* The federal guide: a handbook of the organization and functions of Commonwealth government departments and special war-time authorities, April, 1947. (Government Printer.) Canberra, 1947.

Australia—*Royal Commission on the Constitution of the Commonwealth.* Report. (Government Printer, 10s. 6d.) Canberra, 1929.

Australian Digest, The, 1825–1933 and Supplements 1934–46: being a digest of the reported decisions of the Australian courts and of Australian appeals to the Privy Council; with table of cases: *editors*, B. Sugerman and others: 33 v. (Law Book Co., 60s. *per v.*) Sydney, 1934 to 1946. Annual supplements, 21s.

Bland, F. A., *ed.* Government in Australia: selected readings. (Government Printer, 25s.) Sydney, 1944.

Commonwealth law reports. (Law Book Co., 52s. 6d. *per v.*) Sydney, 1903 to date.

Kerr, D. The law of the Australian constitution. (Law Book Co., 40s.) Sydney, 1925.

Knowles, *Sir* George S. The Commonwealth of Australia constitution act (as altered to 1st July, 1936), and the acts altering the constitution; with notes, tables, indexes and appendices. (Government Printer, 15s.) Canberra, 1937.

Parker, R. S. Public service recruitment in Australia. (Melbourne University Press, 10s.) Melbourne, 1942.

Wood, F. L. The constitutional development of Australia. (Harrap, 10s. 6d.) Sydney, 1933.

RECENT PUBLICATIONS.

Official—

Australia—*Laws, Statutes, etc.* Manual of national security legislation (6th ed.) as in force on 2nd September, 1945, with annotations setting out amendments to 31st December, 1945. 2 v. (Government Printer, 13s. 6d.) Canberra, 1946.

Other—

Bland, F. A. Budget control: an introduction to the financial system of New South Wales: 4th ed. (Angus & Robertson, 7s. 6d.) Sydney, 1946.

Foenander, O. de R. Industrial regulation in Australia: a study of awards, method of remuneration fixation and the status of trade unions under the Australian regulative system. (Melbourne University Press, 17s. 6d.) Melbourne, 1947.

Greenwood, G. The future of Australian federalism: a commentary on the working of the constitution. (Melbourne University Press, 17s. 6d.) Melbourne, 1946.

Local Government Association of N.S.W. Local government in the post-war period. (The Association, 7s. 6d.) Sydney, 1945. (Proceedings of the 1st local government summer school.)

Senior, E. D. Australian systems of voting: the ballot and the scrutiny. (Current Book Distributors, 1s. 6d.) Sydney, 1946.

Political History and International Relations.

Australian Quarterly, The: a quarterly review of Australian affairs. (2s. *per issue.*) Sydney, 1929 to date.

Current Notes on International Affairs: [fortnightly]. (Department of External Affairs.) Canberra, 1936 to date.

Current Problems: [monthly]. (C.P. Publishing Co., 12s. 6d. *p.a.*) Sydney, 1931 to date.

Deakin A. The federal story: the inner history of the federal cause: foreword by the Rt. Hon. W. A. Watt: ed. by Herbert Brookes. (Robertson & Mullens, 12s. 6d.) Melbourne, 1944.

Evatt, *Rt. hon.* H. V. Australian labour leader: the story of W. A. Holman and the labour movement: 2nd ed. (Angus & Robertson, 8s. 6d.) Sydney, 1942.

Foreign policy of Australia: speeches. (Angus & Robertson, 10s. 6d.) Sydney, 1945.

Nation Building in Australia: the life and work of Sir Littleton Ernest Groom: [by L. F. Fitzhardinge *and others*] (Angus & Robertson, 12s. 6d.) Sydney, 1941.

Shepherd, J. Australia's interests and policies in the far east. (Institute of Pacific Relations, $1.50 paper bound.) New York, 1940.

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* It should be noted that several important books on this subject are out of print, and have therefore not been included.

Political History and International Relations—*continued*.

RECENT PUBLICATIONS—

Official—

CLARK, C. I. The Parliament of Tasmania: an historical sketch. (Government Printer.) Hobart, 1947.

EVATT, *Rt. hon.* H. V. Foreign affairs: ministerial statement, together with related documents tabled by [the] Minister on the 26th February, 1947. (Government Printer, 1s. 8d.) Canberra, 1947.

Other—

AUSTRALIAN OUTLOOK, THE (incorporating the Austral-Asiatic bulletin): [quarterly]. (Australian Institute of International Affairs, 2s. 6d. *per issue.*) Sydney, 1947 to date.

DENNING, W. E. Inside parliament. (Australasian Publishing Co., 10s. 6d.) Sydney, 1946.

EVATT, *Rt. hon.* H. V. Australia in world affairs. (Angus & Robertson, 10s. 6d.) Sydney, 1946.

LEVI, W. American-Australian relations. (University of Minnesota Press, $2.75.) Minneapolis, 1947.

STEVENS, *Sir* Bertram. New horizons: a study of Australian-Indian relationships. (Peter Huston, 10s. 6d.) Sydney, 1946.

Economic and Social Conditions.

AUSTRALIA—*Commonwealth housing commission.* Final report, 25th August, 1944. (Department of Post-war Reconstruction, 7s. 6d.) Canberra, 1945.

AUSTRALIA—*Parliament—Joint Committee on social security.* First to ninth interim reports (Government Printer, 11s. 3d.) Canberra, 1941–46.

AUSTRALIA'S post-war economy: by L. G. Melville [*and others*]: papers read at the eleventh summer school of the Australian institute of political science, held in Sydney . . . 1945. (Australasian Publishing Co. 7s. 6d.) Sydney, 1945.

COPLAND, D. B. The Australian economy: simple economic studies: 5th ed. (Angus & Robertson, 7s. 6d.) Sydney, 1946.

ECONOMIC RECORD, THE: the journal of the Economic society of Australia and New Zealand (Melbourne University Press, 10s. *per annum.*) Melbourne, 1925 to date.

RECENT PUBLICATIONS.

Official—

AUSTRALIA—*National health survey committee.* Report and recommendations on health of coal-miners (Government Printer, 3s.) Canberra, 1946. (P.P. 50 of 1945–46.)

AUSTRALIA—*Works and housing, Department of—Directorate of Housing.* About housing. (The Department, *gratis.*) Melbourne, 1946.

COMMONWEALTH BANK OF AUSTRALIA. Commonwealth Bank of Australia in the second world war: an outline of the Bank's principal war-time activities from the outbreak of war in September, 1939, to the termination of hostilities in September, 1945: [compiled by C. L. Mobbs]. (John Sands, 20s.) Sydney, 1947.

TASMANIA—*Parliament—Joint Committee . . . on all aspects of home building* [etc.] Home building: report of . . . committee . . . with minutes of proceedings. (Government Printer.) Hobart, 1947.

Other—

AMALGAMATED ENGINEERING UNION—*Australian section.* Souvenir 25th Anniversary. (The Union, *not for sale.*) Sydney, 1947.

AUSTRALIAN INSTITUTE OF POLITICAL SCIENCE. Summer school, 1946. A white Australia: Australia's population problem: by W. D. Borrie [*and others*] (Australasian Publishing Co., 7s. 6d.) Sydney, 1947.

AUSTRALIAN INSTITUTE OF POLITICAL SCIENCE. Winter Forum, 1946. Repatriation and rehabilitation: by Cyril Smith [*and others*]. (Australasian Publishing Co., 3s. 9d.) Sydney, 1946.

AUSTRALIAN INSTITUTE OF POLITICAL SCIENCE. Winter Forum, 1947. The housing problem in Australia: by W. Bunning [*and others*]: papers read at Winter Forum. (Angus & Robertson, 4s. 6d.) Sydney, 1947.

COUNCIL OF SOCIAL SERVICES OF NEW SOUTH WALES. Directory of social service agencies Sydney. (The Council, 10s.) Sydney, 1946.

THE FABIAN SOCIETY OF N.S.W. The case for bank nationalization. (The Society, 6d.) Sydney, 1947. (Pamphlet No. 1.)

GIFFORD, J. L. K., *and* WOOD, J. V. Australian banking. (University of Queensland, 21s.) Brisbane, 1947.

HILL, Ernestine. Flying doctor calling: the Flying Doctor Service of Australia. (Angus & Robertson, 10s. 6d.) Sydney, 1947.

HOLT, A. J. Wheat farms of Victoria: a sociological survey. (Melbourne University School of Agriculture, 10s.) Melbourne, 1946.

SHAW, A. G. L. Economic development of Australia: rev. ed. (Longmans, 7s.) London, 1946.

WALKER, E. R. The Australian economy in war and reconstruction. (Oxford University Press, $6.00.) New York, 1947.

WALLACE, V. H. Women and children first: an outline of a population policy for Australia. (Oxford University Press, 15s.) Melbourne, 1946.

Industries, Resources and Trade.

Austin, H. B. The merino: past, present and probable. (Grahame Book Co., 30s.) Sydney, 1943.

Australia—*Parliament—Joint Committee on rural industries.* First to fifth progress reports. (Government Printer, 9d., 1s., 9d., 3d., 1s.) Canberra, 1941–42. (P.P. 41, 60, 75, 78, 86 of 1940–43.)

Australia—*Rural reconstruction commission.* First to tenth reports. (Department of Post-war Reconstruction, *gratis.*) Canberra, 1944–47.

Australia To-day: special number of the Australian traveller. (United Commercial Travellers Association of Australia, 2s. *per issue.*) Melbourne, 1905 to date.

Wool Review: [annual] (National Council of Wool Selling Brokers of Australia.) Melbourne, 1938 to date.

See also Commonwealth arbitration reports and Reports of proceedings of the State arbitration courts.

RECENT PUBLICATIONS.

Official—

Australia—*Civil Aviation, Department of.* Report on civil aviation in Australia and New Guinea: 1945–46. (The Department.) Melbourne, 1947.

Australia—*Commonwealth board of inquiry into the coal-mining industry.* Report of the commissioner. 2 v. (Government Printer, 25s.) Canberra, 1946. (P.P. 51 of 1945–46.)

Australia—*Commonwealth forestry and timber bureau.* Empire forests and the war: Australia: prepared by the . . . bureau. (The Bureau.) Melbourne, 1946.

Australia—*Council for scientific and industrial research—Committee on coal utilization research.* Report. (The Council, *gratis.*) Melbourne, 1946.

Clapp, *Sir* Harold W. Report to the Minister for transport on standardization of Australia's railway gauges. (Government Printer, 5s.) Canberra, 1946. (P.P. 17 of 1945.)

Queensland—*Secondary industries development committee.* Report on the development of secondary industries in Queensland. (Government Printer, 2s.) Brisbane, 1946. (P.P. 21 of 1946.)

River Murray Commission. A short history of the River Murray works: by J. H. O. Eaton. (Government Printer.) Adelaide, 1945.

Victoria—*Board of inquiry appointed to inquire into and report upon certain matters relating to the manufacture and distribution of bread.* Report. (Government Printer, 1s. 3d.) Melbourne, 1947.

Victoria—*State rivers and water supply commission.* Utilization of the water resources of the Goulburn River: Eildon reservoir enlargement: general report by M. G. Speedie. (Government Printer.) Melbourne, 1947.

Western Australia—*Royal Commission on wheat marketing and stabilization.* Report . . . . May, 1947. (Government Printer, 6d.) Perth, 1947.

Other—

Australian telecommunications at war. (Mingay Publishing Co., 1s.) Sydney, 1946. (Special issue of the Radio and electrical retailer. v.23, no. 16, May 2, 1946.)

Daniel, H. *and* Belle, Minnie. Australia the new customer: a commercial and economic guide for American business men. (Ronald Press, $4.50.) New York, 1946.

Elford, H. S. *and* McKeown, M. R. Coal-mining in Australia. (Tait Publishing Co., 15s.) Melbourne, 1947.

Holmes, J. McD. Soil erosion in Australia and New Zealand. (Angus & Robertson, 17s. 6d.) Sydney, 1946.

Laurence, J. H. *comp.* Western Australia—industrial opportunities and facts: an account of conditions and opportunities in the western state of the Commonwealth. (Patersons in collaboration with the Government of Western Australia, 25s.) Perth, 1947.

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1945.

Discharges from the services, mainly under the scheme (started in 1943) of special releases recommended by the Manpower Directorate, continued during the first half of the year at the rate of about 6,000 to 8,000 men and 800 to 1,000 women per month. Thereafter the figures rose rapidly, and in the last three months of the year, after the start of general demobilization, 160,000 men and 10,000 women were discharged. Excluding rural and household domestic employment, employment of males was 14,000 higher in December, 1945 than in December, 1944, while employment of females was 28,000 lower. The steel-coal-shipping strikes (*see* 8th November and 3rd December) caused some difficulties in employment conditions at the end of the year.

Economic developments during the year were affected by the very bad 1944–45 harvest as a result of which it was necessary to import substantial quantities of wheat, barley and oats from the United States of America and Canada mainly for stock feeding purposes. Steps taken by the Commonwealth Government to encourage sowing of wheat resulted in a very substantial increase in the acreage sown for the 1945–46 season. The number of sheep had been falling fairly rapidly, and the decline continued during 1945 with the result that the 1945 wool clip dropped about 8 per cent. below the previous year.

With the price stabilization scheme continuing in operation, internal prices (wholesale and retail) remained steady. Import prices also were practically unchanged but export prices rose about 15 per cent. during the year. There were no significant variations in rates of wages, and average earnings were unchanged.

19*th January.*—National Works Council projects involving an expenditure of £153,546,000 approved by Federal Cabinet.

31*st January.*—British Empire Communications Mission arrived in Australia to discuss with Commonwealth Government future of communications within the Empire.

15*th February.*—Conference opened at Lapstone, New South Wales, of Western Pacific section of UNRRA.

24*th February.*—Egg priority system and reduced meat ration scale introduced.

7*th March.*—Commonwealth Parliamentary Committee recommended gratuity scheme for soldiers, involving about £63,000,000 to June, 1945.

18*th April.*—Director-General of Land Transport (Sir Harold Clapp) submitted report on provision of standard railway gauge of 4 ft. 8½ in. in Australia, involving ultimate expenditure of about £200,000,000, including new locomotives and rolling-stock.

25*th April.*—First plenary session of the UNCIO met at San Francisco.

8*th May.*—British Prime Minister announced cease-fire in Europe. (Ratification of surrender of German forces signed in Berlin, 9th May.)

30*th May.*—Commonwealth Government's "White Paper" dealing with transition from war-time to peace-time economy tabled in the House of Representatives.

4*th June.*—Plans adopted by Federal Cabinet for housing programme involving the erection of 24,000 houses in year ended June, 1946.

13*th June.*—Commonwealth Rent Controller appointed, with power to determine rent of rooms and apartments.

20*th June.*—Re-establishment and Employment Bill, providing for re-establishment in civil life of members of Australian Forces, passed all stages in Senate.

27*th June.*—War Cabinet approved expenditure of £1,330,000 on buildings to provide technical college facilities for ex-service personnel.

1*st July.*—Unemployment and Sickness Benefits Act came into operation.

15th August.—Official announcement of end of war with Japan.

16th August.—Act providing for establishment and operation of National Airline Services by Commonwealth assented to.

20th August.—Premiers' Conference at Canberra. Decided to proceed with standardization of Australian railway gauges.

21st August.—Banking Act, to regulate banking, and Commonwealth Bank Act, to re-organize the Commonwealth Bank, proclaimed and operative.

22nd August.—President Truman announced termination of Lend-Lease.

2nd September.—Formal surrender of Japanese Empire signed in Tokyo Bay.

7th September.—Commonwealth Budget for 1945–46 brought down, providing for expenditure of £492,000,000 and revenue of £340,000,000. Estimated expenditure on War (1939–45) Services was £360,000,000 and on Social Services, £65,000,000. A Social Services Contribution from 1st January, 1946, to meet part of the cost of Social Services, and a reduction in Income Tax were provided for—the combined charge for contribution and tax to be 12½ per cent. lower than the existing charge and the annual yield to be about £20,000,000 less. Proposed concessions would reduce the yield from Sales Tax by £2,800,000 a year.

19th September.—Final Report of Commonwealth Housing Commission stated that 700,000 new dwelling units required within ten years to overcome housing shortage.

1st October.—General demobilization of about 500,000 men and women in armed forces commenced in all States.

11th October.—Wool Realization Act assented to, approving an agreement for the disposal of stocks of Empire wool and the setting-up of the Australian Wool Realization Commission.

2nd November.—Announced that export selling price of wool reduced by 6 per cent.

8th November.—Steelworkers', coalminers' and printers' industrial dispute, involving 23,000 workers in New South Wales.

3rd December.—Seamen's dispute began in Sydney, Newcastle, Melbourne and Brisbane. Miners in New South Wales ceased work.

Drastic rationing of gas and electricity, and curtailment of rail services in New South Wales, Victoria and South Australia.

14th December.—Full Court held invalid the provisions of the National Airlines Act, which would have prevented the issue of new licences for services in competition with those of the Australian National Airlines Commission.

17th December.—Miners resumed work in most coal-mines in New South Wales. Meeting of Seamen's Union decided to resume work, with certain exceptions; ironworkers remained on strike.

20th December.—Australian Shipping Board established under National Security Regulations to give unified control of shipping.

1946.

The year 1946 was one of reconversion from war to peace. Demobilization continued throughout the year, about 316,000 men and 27,000 women being discharged. Employment (excluding rural and household domestic) increased by 276,000 during the year (259,000 males and 17,000 females). Unemployment remained negligible throughout the year. At the end of the year there was some increase in Victoria following the commencement on 16th October of the metal trades industrial dispute which lasted till May, 1947.

Production of wool and meat during 1945–46 was below the previous year, but the wheat harvest was considerably greater. Unfavourable seasonal conditions during the year caused a substantial fall in the 1946–47 wheat harvest in New South Wales and Queensland, with a consequent fall in total Australian production, but 1946–47 production of meat and wool improved. Work on post-war housing programmes was increasing and during the year about 25,000 houses were completed.

Export prices were higher than in 1945 and rose rapidly towards the end of the year, and the total value of exports was considerably higher than in the previous year. Import prices increased about 13 per cent. Retail prices and the basic wage remained steady throughout the year until the 7s. increase in the basic wage granted in December. Average factory earnings increased slowly during the year and in the December quarter were about 4 per cent. above the 1945 December quarter.

2nd January.—Opening of new Industrial Finance and Housing Loan Departments of the Commonwealth Bank.

5th January.—Steelworkers at Newcastle mass meeting decided to resume work immediately (*see* 8th November, 1945). New South Wales Branch of Federal Ironworkers' Association re-registered by full bench of Industrial Commission.

8th January.—Commonwealth Government asked Governments of States to confer on five years' plan for stabilization of wheat price at 5s. 2d. a bushel, f.o.b. Australia. (*see* 16th April.)

10th January.—First meeting of General Assembly of United Nations Organization opened in London. Minister for Navy (Mr. N. J. O. Makin) led the Australian delegation.

26th January.—Arrangements made between United Kingdom and Australia, New Zealand, India and South Africa for operation of air trunk routes in various parts of the world. Each partner to be responsible for ground organization on portion of routes, and revenue to be pooled between operators.

30th January.—Notification by Commonwealth Government to Registrar of Arbitration Court that Government would intervene in claim by Printing Industry Employees' Union for 40-hour week.

7th February.—In response to a request from Council of UNRRA, Federal Cabinet decided to make a further contribution of £12,000,000 if necessary.

11th February.—Commonwealth Government decision to provide substantial funds for rehabilitation of Australian mining industry and for development of mining projects generally which offer promise of contributing materially to the national development, employment and economic welfare.

14th February.—Mr. L. G. Melville to attend as an observer the first meeting in America of the Board of Governors to establish International Monetary Fund and International Bank for Reconstruction and Development.

25th February.—Commonwealth Government plans increased annual immigration intake.

1st March.—Cessation of man-power controls over employment of male labour.

5th March.—Under agreement between British and Australian Governments, free passages will be granted to British service personnel and dependants, and assisted passages to British civilians and dependants, who wish to emigrate to Australia.

22nd March.—Tasmanian Legislative Council rejected a bill to grant price control to Commonwealth for three years.

26th March.—A.C.T.U. lodged with Arbitration Court applications on behalf of 47 unions for right to intervene in claim by Printing Industry Employees' Union for a 40-hour week.

28th March.—Bills introduced by Attorney-General to amend the Constitution regarding—(1) Social Services, (2) Marketing of Primary Products, (3) Industrial Employment. (Subsequently passed by both Houses and submitted to electors. *See* 28th September.)

29th March.—Approval by Federal Cabinet of draft for submission to the United States of America for a reciprocal air transport agreement. (Agreement signed 3rd December, 1946.)

1st April.—Meat workers' industrial dispute in Queensland, involving approximately 7,000 workers. (Lasted until 7th July.)

13th April.—States Grants (Tax Reimbursement) Act, 1946, continuing uniform taxation, assented to.

16th April.—Agricultural Council of Federal and State Ministers for Agriculture decided that uniform legislation should be introduced in the several Parliaments to give effect to Commonwealth Wheat Stabilization Scheme.

2nd May.—Inauguration of Commonwealth Employment Service (which functioned formerly as the Commonwealth man-power organization).

6th May.—Commonwealth Government's proposals for complete medical service for Australia, free of charge, brought before conference of State Ministers of Health.

7th May.—Victorian Government sub-committee report on brown coal development submitted to full State Cabinet plan for making Victoria independent of New South Wales black coal supplies.

16th May.—Announced by General Manager of Commonwealth Aircraft Corporation Pty. Ltd. (Mr. L. J. Wackett) that De Havilland Vampire jet-propelled fighters would be built in Australia.

20th May.—Hearing of 40-hour week case commenced in Commonwealth Arbitration Court. Wharf labourers throughout Australia resumed work after a wool-loading dispute lasting a fortnight.

23rd May.—Agreement reached between Australian and United Kingdom Governments for relief from double taxation. (*See* also 2nd August.)

24th May.—Failure of a conference of State Transport Ministers to reach agreement on Commonwealth uniform rail gauge proposals.

1st June.—Announced that unions and employers had jointly agreed to interim maximum number of 16,600 ex-servicemen to be trained in building trades under Commonwealth Reconstruction Training Scheme.

2nd June.—Substantial reductions announced in telegram charges between British Empire countries and United States of America.

4th June.—Cabinet decided to strengthen and expand Trade Commissioner Service.

6th June.—Extension announced of re-establishment benefits to members of forces of all Empire Countries, in addition to the United Kingdom, the United States of America, and other Allied countries specifically approved.

10th June.—Final settlement of Lend-Lease and reciprocal aid between Australia and United States of America.

13th June.—Appointment of Commonwealth Insurance Commissioner under Life Insurance Act 1945 (assented to 16th August, 1945), to supervise activities of life insurance companies.

21st June.—Wheat Industry Stabilization Bill introduced in House of Representatives. (Act assented to 9th August.)

Announced by Minister for Trade and Customs that when auction sales recommenced after 30th June, a subsidy would be paid Australian manufacturers using wool in goods for domestic consumption.

Overseas Telecommunications Bill to provide for establishment and operation of overseas telegraphic, telephone and similar services by the Commonwealth introduced. (Act assented to 7th August.)

1st July.—Joint organization, known as United Kingdom and Dominion Wool Disposals Ltd., commenced operations.

13th July.—United States House of Representatives passed bill to grant Britain total credit of 4,400 million dollars.

24th July.—Coal Industry Bill introduced in House of Representatives providing *inter alia* for the setting up of a joint Commonwealth-State authority. (Act assented to 15th August. Complementary State Act assented to 25th September.)

2nd August.—Details of double taxation relief agreement between Britain and Australia announced. (Agreement signed 29th October; amending Act to Income Tax Assessment Act incorporating agreement assented to 3rd June, 1947.)

Railway Standardization Agreement Bill authorized the Commonwealth to act in an agreement with New South Wales, Victoria and South Australia. (Commonwealth Act assented to 15th August; State complementary Acts—South Australia, 10th December; Victoria, 21st December, 1948. New South Wales has not yet (December, 1948) ratified agreement.)

15th August.—An Australian conversion of $20,000,000 for a ten year period at 3¼ per cent. floated in New York. (First of a series of operations undertaken by the Commonwealth in New York.)

20*th August.*—Premiers' Conference decided that price control and control of land sales should be continued after end of National Security Regulations on 31st December.

22*nd August.*—Commonwealth and State Governments agreed to carry out programme of housing to provide employment in building construction industry for a minimum of 130,000 men over next ten years.

31*st August.*—South Australian electricity undertakings passed from private to State control.

2*nd September.*—Wool sales by auction resumed in Sydney following termination of war-time appraisement system.

15*th September.*—Australian National Airways Pacific fortnightly service Sydney–Vancouver commenced.

28*th September.*—Constitution Alteration Referendum held to decide whether Commonwealth should be granted powers in regard to Social Services, Organized Marketing of Primary Products and Industrial Employment. Although a majority of electors were in favour of each of the proposals, only for Social Services was a majority of voters in a majority of States obtained. (Act assented to on 19th December.)

9*th October.*—New South Wales Government approved expenditure of £33,000,000 on 15-year project to store water.

16*th October.*—Ironworkers' and moulders' industrial dispute commenced in two iron foundries in Victoria. (By 24th October it extended to all iron foundries, and employees in engineering and allied trades were later involved. Dispute lasted until 7th May, 1947.)

21*st October.*—Victorian train and Melbourne tram industrial dispute commenced (Lasted until 29th October.)

23*rd October.*—Industrial dispute involving 227 chemical workers in Sydney. (Lasted until 29th August, 1947.)

30*th October.*—Commonwealth Government moved in Arbitration Court for investigation of basic wage. Announced that Court had "accepted broadly" that 40-hour week should be basis of working hours in Australia.

31*st October.*—Basic wage inquiry, adjourned in 1940, to be re-opened.

8*th November.*—Locomotive Engine-drivers', Firemen's and Cleaners' Union dispute in Western Australia. Nearly 90,000 workers immediately thrown out of work. (Lasted until 22nd November.)

14*th November.*—Commonwealth Budget for 1946–47 introduced, providing for expenditure of £444,000,000 and revenue of £385,000,000. Estimated expenditure on Defence and Post-war Charges was £221,000,000 (including £35,000,000 for re-establishment and repatriation), on social services £68,000,000 and on new works £26,000,000. Clothing and household drapery would be exempted from Sales Tax, the general rate of Sales Tax to be reduced to 10 per cent. and Customs and Excise duties to be lowered. With income tax reductions made earlier in the year, these concessions would reduce the annual yield from taxation by about £37,000,000.

18*th November.*—Interstate executive of A.C.T.U. decided to apply to Arbitration Court for increase of £1 in basic wage.

20*th November.*—Experimental rocket range and supporting establishments for guided projectiles to be set up at Mount Eba (South Australia). Estimated cost £6,000,000. (Site subsequently changed to Woomera, 90 miles south-east of Mount Eba.)

21*st November.*—Defence (Transitional Provisions) Bill introduced in House of Representatives. (Act assented to 14th December.)

7*th December.*—Construction commenced on new Burrendong dam on Macquarie River, 20 miles from Wellington, New South Wales, to provide a catchment area of 5,360 square miles, at a cost of £2,000,000.

11*th December.*—Members of Gas Employees' Union in Melbourne decided to strike until claims for wage increases met. (Recommendation of A.C.T.U. to return to work on 16th January, 1947 accepted by gas workers, including those involved in Sydney and Adelaide.)

13*th December.*—Interim basic wage rise of 7s. in all capital cities (except Hobart, 6s.) announced. To operate from first pay period in December.

Prime Minister announced partial relaxation of War-time Wage Pegging Regulations.

14th December.—Qantas Empire Airways Agreement Act, authorizing Government to acquire United Kingdom's interest in Qantas Empire Airways Ltd., assented to.

31st December.—With expiry of National Security Act, at midnight, 183 sets of regulations which restricted activities of citizens during war ceased to operate; 61 sets of regulations continued to operate for a further year under Defence (Transitional) Provisions Act. Ceiling price control on shares, and conditions regarding minimum holding period of shares before resale now removed.

1947.

During 1947 approximately 30,000 men and 3,000 women were discharged from the Services, rather more than two-thirds of them in the first half of the year. Employment (excluding rural and household domestic) increased by about 141,000 (114,000 males and 27,000 females). Unemployment remained negligible during the year; shortage of labour was a common complaint by employers. The free and assisted migration scheme came into operation during the year and an excess of 12,000 permanent departures over permanent arrivals in 1946 was converted into an excess of 12,000 arrivals over departures.

Seasonal conditions generally were very favourable and despite some losses due to rust and wet weather during the harvesting period, the 1947–48 wheat harvest was an all-time record of about 220,000,000 bushels. Wool, meat and butter production was higher than in the previous season. During 1947 nearly 39,000 houses were completed.

Export prices continued to rise rapidly, and at the close of the year were about 35 per cent. above the level at the beginning of the year. Total value of exports was over £300,000,000 and about 20 per cent. higher than in 1946. Import prices increased 17 per cent. above the level at the end of 1946; imports nearly 60 per cent. as compared with 1946, notwithstanding the imposition during the second half of the year of increasingly severe restrictions on imports from dollar areas. Retail prices increased by less than 6 per cent. in the year and wholesale prices by about 13 per cent. After the removal of control at the end of 1946 share prices advanced substantially. Following the settlement of the metal trades dispute in Victoria margins prescribed in the metal trades award were substantially increased, and similar increases were subsequently granted in other industries. Average factory earnings in the last quarter of the year were 13 per cent. above the previous year.

After a period of relative stability over the previous five years, national income started to rise, and gross private investment, which had been 12 per cent. of gross national product in 1945–46, rose to about 20 per cent. in 1947.

6th January.—Stock exchanges conducted business on free market, following lifting after five years of Government restrictions on share dealings.

Abandonment of war-time price stabilization subsidies by Commonwealth Government commenced with withdrawal of subsidy on tobacco, resulting in immediate price increase.

4th February.—Wharf labourers' dispute over holiday pay held up many ships at Australian ports. (Settlement announced 12th February.)

14th February.—Termination of fourth and final stage of demobilization of Australian fighting forces reached. Forces reduced to 60,000.

25th February.—Federal Cabinet approved reductions in income tax, to operate from 1st July, some pensions to be increased. (Act assented to 3rd June.)

4th March.—Announced that Australia would make gift of £A.25,000,000 to Britain, in form of reduction of Britain's sterling debts in Australia. (Act appropriating grant assented to 11th June.)

5th March.—Industrial Arbitration (Forty-hour Week) Amendment Bill introduced in New South Wales Legislative Assembly. (Act assented to 28th March.)

6th March.—Federal Government decided to appoint committee to investigate suggested establishment of National Superannuation Fund, to take over payment of all Government pensions and provide retiring allowance for every Australian. (Plans for establishment abandoned 18th February, 1949, following presentation of report, because of excessive cost.)

10*th March.*—Seventy ships held up as result of Sydney wharf labourers' industrial dispute because of Stevedoring Industry Commission's order to work overtime. (Dispute ended 25th March; compromise terms accepted.)

13*th March.*—International Monetary Agreements Bill approving Australia becoming a member of International Monetary Fund and International Bank for Reconstruction and Development introduced. (Act assented to 2nd April. Australia's application for membership approved 25th May.)

17th *March.*—Victorian State Cabinet approved £9,600,000 Eildon Weir enlargement project (capacity to be 2,350,000 acre feet.)

19*th March.*—Majority of Full Arbitration Court decided that Basic Wage and 40-hour Week cases would be heard separately.

23*rd March.*—Extension of dispute in Victoria involving members of Amalgamated Engineering Union caused stoppage of all tramway buses, and cuts in suburban and country rail services. (*See* 16th October, 1946.)

3*rd April.*—Wage pegging regulations to be relaxed to give all industrial authorities (Commonwealth and State) power to alter rates of pay in any type of case, provided the Chief Judge of the Commonwealth Arbitration Court is satisfied that an alteration is not opposed to national interests.

23*rd April.*—Full Arbitration Court ordered deregistration of Amalgamated Engineering Union, to take effect after fourteen days unless the union instructed its members to return to work in meantime. (Further move in dispute originating with ironworkers and moulders in Victoria on 16th October, 1946. *See* above.)

30*th April.*—Amending Commonwealth Conciliation and Arbitration Bill providing for appointment of additional conciliation commissioners with extended powers passed in House of Representatives. (Act assented to 20th May.)

5*th May.*—After compulsory conference of parties to the industrial dispute in Victoria, representatives of Unions and employers agreed on terms of settlement of Metal Trades dispute which had existed in Victoria since October, 1946. (*See* 16th October, 1946, and subsequent dates.)

8*th May.*—Two hundred Local Government bodies in Australia directed to bank with the Commonwealth Bank from 1st August.

28*th May.*—Writ lodged in High Court by Melbourne City Council challenging validity of Banking Act.

3*rd June.*—Work commenced on Commonwealth Government's new £11,000,000 scheme to convert Kingsford Smith aerodrome at Sydney into greatest airport in Australia.

Federal Cabinet approved expenditure of £250,000,000 on defence in next five years.

19*th June.*—Announced that immigration offices would be opened at Oslo, The Hague, Paris, Berlin, San Francisco, New York, Shanghai, New Delhi and Cairo.

26*th June.*—Following settlement of metal trades dispute in Victoria (*see* above), Federal Arbitration Court granted substantial marginal increases to metal trades' employees in higher classifications but not to those in lower paid positions.

30*th June.*—Census of Australia. First since 1933.

1*st July.*—New scale of income tax deductions, involving reductions ranging from 100 per cent. in low-income group to 7.9 per cent. on highest levels, introduced as from first pay period in July.

Forty-hour week comes into operation in New South Wales for all employees working under State awards. (*See* 5th March.)

3*rd July.*—Purchase by Commonwealth Government of shares in Qantas Empire Airways Ltd. held by Queensland and Northern Territory Aerial Services Ltd. (approving Act assented to 24th June, 1948). Qantas Empire Airways Ltd. now completely owned by Commonwealth Government. (*See* 14th December, 1946.)

15th July.—Sterling acquired in current trade transactions became convertible under terms of loan agreement between United Kingdom and United States of America. (Arrangements temporarily suspended 20th August.)

23rd July.—Australia agreed to take 4,000 displaced persons as migrants this year through International Refugees Organization, and 12,000 each following year if Organization can supply shipping.

1st August.—Charges imposed by Commonwealth Government on airline operators in Australia for use of civil airways facilities provided by Commonwealth.

4th August.—Approval announced of £4,000,000 water scheme in Western Australia for supply of water to Great Southern and North-eastern wheat belts.

6th August.—Announced that British Government in October would establish Overseas Food Corporation with working capital of £50,000,000 to develop food production in Australia and other Dominions and Colonies. (*See* 17th October.)

13th August.—Full High Court declared invalid Section 48 of Banking Act 1945 requiring municipal councils to transfer their accounts from private banks to Commonwealth Bank. (*See* 8th and 28th May.)

22nd August.—Government authorized resumption of private trading with Japan.

Prime Minister announced heavy reduction of all imports from dollar areas and severe restrictions on dollar advances for travellers.

8th September.—Federal Arbitration Court gave judgment reducing standard weekly hours of work in industry from 44 to 40 as from 1st January, 1948.

19th September.—Commonwealth Budget for 1947–48 presented, providing for expenditure of £427,000,000 and revenue of £397,000,000. Estimated expenditure on Defence and Post-war Charges was £168,000,000 (including £39,000,000 for re-establishment and repatriation), on social services £77,000,000 and on new works £33,000,000. The abolition of War-time Company Tax, the suspension of the Gold Tax and concessions in Sales Tax, with the income taxation reductions made earlier in the year, were estimated to reduce the taxation yield by about £42,000,000 a year.

14th October.—Industrial dispute of builders' labourers in Sydney and Newcastle affecting about 38,000 employees. (Settled 20th October.)

15th October.—Banking Bill to nationalize Australian trading banks introduced into House of Representatives. (Act assented to 27th November.)

17th October.—British Food Minister announced that Australia will be asked to launch a great food-growing scheme to help Britain. It provides for long-term contracts for the supply of meat, wheat, dairy products, nuts and other food for which Britain will pay by increased exports. (*See* 6th August.)

5th November.—Defence (Transitional Provisions) Bill introduced in House of Representatives to continue for another year controls on food, prices, rent, capital issues and land sales. Other regulations were amended or discontinued. (Act assented to 11th December.)

18th November.—Text of General Agreement on Tariffs and Trade reached at Geneva tabled in House of Representatives. (Act approving acceptance by Australia of General Agreement on Tariffs and Trade and Havana Charter for an International Trade Organization—*see* below—assented to 17th December, 1948.)

21st November.—Draft charter for proposed International Trade Organization prepared at Geneva submitted to World Trade Conference at Havana. (*See* above.)

27th November.—Constitution Alteration (Rents and Prices) Bill introduced into House of Representatives. (Bill subsequently passed both Houses. *See* 29th May, 1948, for referendum results.)

28th November.—Trading banks and States of Victoria and South Australia (Western Australia later) applied to High Court for writs to prevent Federal Government acquiring monopoly of banking business. (*See* 15th October.)

11th December.—Agreement signed for development of Blair Athol coal-fields in Queensland through expenditure of about £18,000,000 of British capital.

18th December.—Announcement of big wheat deal, under which Australia contracted to sell to Britain 80,000,000 bushels from 1947–48 harvest at 17s. per bushel (Australian currency) and 25,000,000 bushels to India at 18s. 6d.

1948.

Employment continued to increase during 1948, the total increase (excluding rural and household domestic) being about 88,000 (63,000 males and 25,000 females). The number on unemployment benefit remained negligible during the whole year and labour shortages continued fairly generally. The migration programme was carried on during the year with increasing vigour and permanent arrivals exceeded permanent departures by 48,000.

Although black coal production for the whole of Australia reached 14,800,000 tons, there were at times serious shortages resulting in restrictions in electricity and gas supplies and in transport services. Seasonal conditions continued favourable, the 1948–49 wool clip being slightly larger than in the previous year, and the wheat crop considerably above average although well below the previous year. There were about 48,000 new houses completed during 1948.

Exports rose to over £500,000,000, an increase of 60 per cent. over 1947, and imports to about £380,000,000, an increase of 40 per cent. over 1947. Export prices increased more than 25 per cent. over the year and import prices by 6 per cent. Retail prices increased about 10 per cent. over the year, wholesale prices about 14 per cent. Average factory earnings in the last quarter were 13 per cent. above the last quarter of 1947.

Partly as a result of increasing prices, national income continued to rise, and gross private investment continued at about 20 per cent. of gross national product.

1st January.—Forty-hour week became effective throughout Australia.

4th January.—Commencement in Melbourne of tram and tramway bus industrial dispute because of dissatisfaction with new 40-hour week roster (settled 16th January).

9th January.—Food talks began between British Ministry of Food and Commonwealth Government to find ways and means of stimulating Australian primary production to meet Britain's food crisis.

16th January.—Emergency Transport Bill giving sweeping powers to Victorian Government to maintain essential services in any future emergency, passed by Victorian Legislative Assembly. (Assented to 20th January, proclaimed 15th November.)

23rd January.—Secretary to the Treasury (Mr. S. G. McFarlane) appointed fourteenth director of the International Monetary Fund and Bank of World Reconstruction and Development. The Commonwealth Statistician (Dr. Roland Wilson) to be alternate director.

2nd February.—Railway dispute on wages awards in Queensland involving about 19,000 railwaymen. (Lasted till 4th April.)

9th *February.*—Bank nationalization case opened in Full High Court in Melbourne. (*See* 15th October and 28th November, 1947, and 11th August, 1948.)

12th February.—£6,000,000 Victorian Beaufort Homes project cancelled.

18th February.—New South Wales Government decided to open State operated coal mines in Burragorang Valley, Awaba-Dora Creek area and Muswellbrook district.

20th February.—Major water conservation works in £25,000,000 plan for "Drought proofing" Victoria, involving, amongst other works, the enlargement of Eildon reservoir, commenced.

26th February.—United Nations Trade and Employment Agreement tabled in Parliament. (*See* 18th November, 1947.)

27th February.—Drastic powers assumed by Queensland Government to end railway dispute. State of emergency declared.

2nd March.—Six 3,000 h.p. marine diesel engines to be built by Munitions Department, in consultation with Australian Shipping Board, two being required in 1949.

10th March.—Queensland Government Industrial Law Amendment Act of 1948 assented to, granting police extraordinary powers to prevent "picketing". (Act repealed 16th September.)

25th March.—International trade charter signed in Havana. (*See* 18th November, 1947.)

5th April.—The Commonwealth Government decided to pay half the capital cost of £4,300,000 of a scheme to reticulate water to certain rural areas of Western Australia, to towns along the Great Southern Railway, and to increase the supply to the eastern gold-fields areas. (*See* 4th August, 1947. Western Australia Grant (Water Supply) Act assented to 25th November.)

22nd April.—International Wheat Agreement Bill introduced into Parliament. (Assented to 24th June. Failure of United States of America and other nations to ratify agreement rendered it inoperative.)

29th April.—Minister for Defence announced five-year defence programme of £250,000,000 including £33,500,000 for scientific research.

5th May.—Minister for Housing in New South Wales announced scheme for £8,000,000 housing project to meet industrial expansion, involving 5,000 homes in the Wollongong–Port Kembla district. Scheme will take five years to complete.

10th May.—Australian buyers will be licensed to import £2,000,000 worth of Japanese goods, principally textiles. Japan to take Australian wool in return.

29th May.—Constitution Alteration (Rents and Prices) Referendum, to decide whether Commonwealth should retain control of rents and prices, resulted in majorities in all States against proposal. Total voting—1,793,712 for, 2,618,183 against.

1st June.—Commonwealth Pharmaceutical Benefits Scheme commenced.

3rd June.—Australian Iron and Steel Ltd. plans to spend £20,000,000 in the next ten years on extensions to its Port Kembla works to include a new tinplate mill and blast furnaces on an area of more than two square miles.

21st June.—Conference between Prime Minister and State Premiers to discuss organization of price control by the respective states when control is relinquished by Commonwealth in September.

22nd June.—Meat and clothes rationing ceased throughout Australia.

3rd July.—Prime Minister left for London to discuss empire trade and other problems.

5th July.—Joint New South Wales-Queensland irrigation scheme at cost of £2,500,000 planned for the Dumaresq and Macintyre Rivers.

12th July.—Announcement of modified wheat stabilization plan guaranteeing a price of 6s. 3d. per bushel f.o.r. ports for bulk wheat. (Subsequently adopted by majority of growers in four main wheat producing States and ratified by Commonwealth—Wheat Industry Stabilization Act assented to 25th November—and State Governments, the plan will operate for the five years 1948–49 to 1952–53).

26th July.—Announced that the Victorian Government intended spending between £50,000,000 and £60,000,000 on the development of brown coal and power resources in the State.

11th August.—Judgment delivered by Full High Court declaring invalid certain vital sections of Banking Act 1947. (*See* 9th February.)

16th August.—Control of rents passed from Commonwealth to States.

17th August.—Announced that new trade agreement concluded with Sweden.

19th August.—New Zealand currency restored to parity with sterling.

24th August.—Australian Loan Council approved borrowing programme of £100,000,000 for 1948–49.

Announcement of increase from £360,000,000 to £569,000,000 in national works programme of public works to cushion a possible depression during the next five years, covering 6,245 works projects throughout Australia.

26th August.—Announced that a plant extension programme by John Lysaght (Aust.) Pty. Ltd. at Port Kembla was expected to increase Australian sheet steel production from 240,000 tons to 600,000 tons per year by 1955.

2nd September.—Minister for Commerce and Agriculture announced that, under terms of a seven-year agreement operating from June, 1948, Australia will ship to United Kingdom the total exportable surplus of butter and cheese, less agreed quantities for other markets.

8th September.—Commonwealth Budget for 1948–49 introduced, providing for expenditure of £511,000,000 and revenue of £493,000,000. Estimated expenditure on Defence and Post-war Charges was £199,000,000 (including £10,000,000 United Kingdom Grant, £38,000,000 for re-establishment and repatriation and £23,000,000 to be set aside for war gratuities), on social services, £88,500,000 and on capital works and services, £38,000,000. Reductions in Income Tax, Social Services Contribution, Sales Tax and Excise Duty were expected to reduce the yield from taxation by about £29,000,000 a year.

20th September.—Control of prices taken over by individual States from Commonwealth. Thirty thousand items released from price control, but control continued on essential commodities and services, and house and agricultural land sales (about 20,000 items).

30th September.—Bill introduced into House of Representatives providing for acceptance by Australia of the Charter of International Trade Organization and a General Agreement on Tariffs and Trade. (*See* 18th November, 1947).

1st October.—Minister for External Territories stated that an agreement between Commonwealth and New Zealand Governments provides for joint acquisition of Christmas Island Phosphate Company as at 31st December, at a cost of £2,750,000.

6th October.—Coal miners' dispute in Southern coal-fields, New South Wales (Kemira Tunnel Dispute), resulting in general stoppage of coal production. (Settled 8th November).

18th October.—Price control lifted from all new buildings in Victoria.

19th October.—Federal control over shipping freights and passenger fares relinquished.

20th October.—Defence (Transitional Provisions) Bill introduced to extend for further twelve months certain National Security Regulations. (Act assented to 21st December.)

24th October.—Announced that Joint Coal Board would spend £16,000,000 on mechanizing and modernizing Australian coal mines.

10th November.—Judicial Committee of Privy Council granted Commonwealth Government leave to appeal against the judgment of the High Court of Australia, which declared Section 46 of the Banking Act 1947, invalid. (On 26th July, 1949 the Privy Council announced the dismissal of the Government's appeal.)

12th November.—Announcement of new agreement under which Britain will buy more than half of Australia's dried fruit production for the next five years.

15th November.—Victorian Government proclaimed as law the Essential Services Act. (*See* 16th January.)

20th November.—Food mission from India arrived to discuss agreement for purchase of 25,000,000 bushels of 1948–49 wheat crop.

22nd November.—Legislation approved to establish and constitute an Australian Shipping Board to run a Commonwealth line of ships. (Shipping Bill introduced in Senate 9th December ; Act assented to 25th March, 1949.)

29th November.—New Australian made car, the " Holden ", displayed publicly for first time.

22nd December.—Commonwealth Government relinquished remaining controls on sale of new motor vehicles.

APPENDIX.

(Recent information and returns which have come to hand since the various chapters were sent to press are given hereunder.)

CHAPTER III.—GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

Number and Salary of Members of the Legislatures, p. 61.—The following table shows the number and annual salaries of ordinary members in each of the legislative chambers at 31st December, 1948.

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, 31st DECEMBER, 1948.

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tasmania.	Total
				NUMBER OF MEMBERS.				
Upper House ..	(*a*) 36	60	34	(*b*)	20	30	19	199
Lower House ..	(*a*) 75	90	65	(*c*) 62	39	50	30	411
Total ..	(*a*) 111	150	99	62	59	80	49	610
				ANNUAL SALARY.				
	£	£	£	£	£	£	£	
Upper House ..	(*d*) 1,500	(*e*) 300	(*f*) 750	(*b*)	(*g*) 900–975	(*h*) 960	(*i*) 800–1,050	..
Lower House ..	(*d*) 1,500	(*j*) 1,375	(*f*) 1,050	(*k*) 1,050	(*g*) 900–975	(*h*) 960	(*i*) 850–1,050	..

(*a*) Representation Act 1948 provided for the increase in numbers of the Senate to 60 and of the House of Representatives to 121 (excluding 2 members for the Territories) to take effect after the next general elections. (*b*) Abolished in 1922. (*c*) Electoral Districts Act of 1949 provided for an increase in the number of members and electorates to 75, to apply from beginning of Thirty-second Parliament (in ordinary course of events to be elected in 1950). (*d*) Increased from £1,000 as from July, 1947. (*e*) From September, 1948. (*f*) Increased from £350 and £650 as from July, 1948. Plus £100 for other than metropolitan electorates. (*g*) According to distance of electorate from Adelaide. Increased from £600 as from September, 1948. (*h*) Increased as from October, 1947 from £600 plus basic wage adjustment. Plus £50 where electorate is more than 50 miles from Perth. (*i*) According to area of electorate and distance from the Capital. Increased from £370–£500 and £400 £500 as from August, 1948. (*j*) Increased from £875 as from July, 1947. (*k*) Increased from £850 as from July, 1948

§ 2. Parliaments and Elections.

The Commonwealth Government, p. 62.—The Representation Act 1948 (assented to on 18th May, 1948) provides for the increase in the numbers of members of the Senate from 36 (six from each State) to 60 (ten from each State), thereby enabling an increase to be made in the numbers of the members of the House of Representatives from 74 to 121, excluding the member for the Northern Territory and the member for the Australian Capital Territory (provision has been made in the Australian Capital Territory Representation Act 1948 for the election of a member with similar powers and privileges to those enjoyed by the member for the Northern Territory). The numbers of members in the

House of Representatives for the individual States will be: New South Wales, 47; Victoria, 33; Queensland, 18; South Australia, 10; Western Australia, 8; Tasmania, 5; Australian Capital Territory, 1; and Northern Territory, 1. The increase in numbers will be effected in the new Parliament after the next general elections.

Commonwealth Referenda, p. 64.—On 29th May, 1948 a referendum was taken to decide whether power should be granted to the Commonwealth Government to control rents and prices (including charges). The results showed a majority in each State against the proposal. Particulars were as follows :—

CONSTITUTION ALTERATION (RENTS AND PRICES) REFERENDUM, 29th MAY, 1948.

State.	Yes.	No.	Informal.	Total.
New South Wales	723,183	1,012,639	26,269	1,762,091
Victoria	559,361	693,937	16,739	1,270,037
Queensland	187,955	422,236	7,487	617,678
South Australia	167,171	229,438	6,169	402,778
Western Australia	105,605	168,088	4,589	278,282
Tasmania	50,437	91,845	2,853	145,135
Total	1,793,712	2,618,183	64,106	4,476,001
Percentage(*a*)	40.66	59.34	..	..

(*a*) Excludes informal votes.

Parliamentary Retiring Allowances Act 1948.—On 21st December, 1948 an act to provide for contributory retiring allowances for ex-members of the Commonwealth Parliament was assented to. The act operates from 1st December, 1948 and applies only to present and future members. It provides for the establishment of a trust, constituted by the Treasurer, two senators and two members of the House of Representatives, and a fund, from which all benefits will be paid, to consist of contributions and repayments of members and ex-members of Parliament, payments by the Commonwealth and income from investments. Principal benefits payable are as follows :—

(i) To a member *not* retiring voluntarily—(*a*) with service not less than eight years and having reached the age of 45 years, or if not, on reaching that age—a pension of £8 per week for life; (*b*) with service less than eight years—refund of contributions plus a payment equal to one and a half times the contributions paid (the " Commonwealth supplement ").

(ii) To a member retiring voluntarily—(*a*) with service not less than twelve years and having reached the age of 45 years—a pension of £8 per week for life; (*b*) in any other case—refund of contributions.

(iii) To a widow of a member or ex-member—a pension of £5 per week for life, but ceasing on re-marriage; *or* the sum of the contributions paid and the Commonwealth supplement less any amounts of pensions received by, or accrued to, the deceased person before death.

In cases where the period of service is longer than eight years, the Commonwealth supplement is one and a half times the contributions paid during the last eight years.

Contributions to the fund by members are at the rate of £156 per annum, and the Commonwealth will pay into the fund an amount equal to 60 per cent. of each pension payment and an amount equal to the Commonwealth supplement payable to any person.

The Parliament of Victoria.—*Parliamentary Contributory Retirement Fund Act* 1946, *p.* 68. The Parliamentary Contributory Retirement Fund Act 1948 amended the original act, *inter alia*, by increasing the amount deducted from a member's salary from £1 to £2 per fortnight, and by extending the scope of the scheme regarding payments to widows of members.

The Parliament of Queensland.—*Constitution, p.* 68. Under the Electoral Districts Act of 1949 the number of members in the Queensland Parliament, and the number of electorates, were increased from 62 to 75. These increases are to apply from the beginning of the Thirty-second Parliament which, in the ordinary course of events, will be elected in 1950. The Act divided the State into four zones; Zone 1, the "Metropolitan Zone", is divided into 24 electoral districts returning 24 members, Zone 2, the "South-Eastern Zone" into 28 districts returning 28 members, Zone 3, the "Northern Zone", 13 districts and members, and Zone 4, the "Western Zone", 10 districts and members. A commission of three, to be appointed by the Governor-in-Council, will completely distribute the prescribed zones into the number of electoral districts prescribed by the Act. In doing this the Commissioners are to consider community or diversity of interest, means of communication, physical features, and boundaries of Petty Sessions Districts and of areas of Local Authorities.

Parliamentary Contributory Superannuation Fund Act 1948. This Act provides for the establishment of a fund from which annuities and refunds of contributions will be paid in respect of Members of the Legislative Assembly who die or cease to be members on or after 1st January, 1949. The rates of annuity vary, depending on length of service, from £5 to £7 per week. Qualifications in an ex-member for an annuity are service for at least nine years, payment of contributions amounting to not less than £200, and attainment of the age of 60 years (50 years if defeated on re-election, not selected to stand, or able to produce other sound reasons for resigning or not seeking re-election).

Persons otherwise qualified for an annuity, but who have not paid at least £200 in contributions, may become entitled by payment into the fund of the amount deficient. Provision exists for annuities to widows of annuitants and qualified members at two-thirds of the weekly rate appropriate to the length of service of the husband. Members, or the widows of members, unable to qualify for an annuity are entitled to a refund of contributions. The Contributory Superannuation Fund is financed by (i) payments of £4 per fortnight from each member, (ii) monthly payments by the Treasurer of amounts equal to the contributions paid or payable during each month, and (iii) such additional sums as may be necessary each year.

The Parliament of South Australia.—*Parliamentary Superannuation Act* 1948. Under this Act provision is made for the establishment of a fund for payment of superannuation pensions in respect of persons who have served as Members of Parliament who die or cease to be members after the passing of the Act. The rate of pension payable is dependent on length of service £250 per year in respect of 12 years, plus £20 per year for each complete additional year of service up to a maximum of £370 per year. Qualifications for entitlement of an ex-member to a pension include service for at least twelve years, attainment of 50 years of age, payment of contributions amounting to at least £351 and fulfilment of certain conditions in the event of resigning before, or retiring after, expiration of his term. A person not having paid the requisite amount to the fund, but otherwise qualified, may become entitled to a pension by paying in the deficient amount. Pension rates for widows are three-fifths of the annual rate appropriate to the husband's service. Refunds of contributions are provided for in respect of members who retire or die with less than twelve years' service. Contributions to the fund comprise (i) payments by members at the rate of £58 10s. per year, (ii) monthly payments by the Treasurer of sums equal to the contributions paid or payable each month, and (iii) such additional sums as may be necessary each year.

The Parliament of Western Australia.—*Particulars of Elections, p.* 70. The number of electors enrolled for the 1948 Legislative Council elections were 60,874 males and 25,985 females, total 86,859. The number of electors who voted in contested electorates were: males, 20,709 (43.00 per cent.); females, 7,862 (35.32 per cent.); total, 28,571 (40.57 per cent.).

Members of Parliament Fund Act 1941–1944, *p.* 70. This Act was repealed by the Parliamentary Superannuation Act 1948, which provides for the payment on loss of membership of a pension in place of the lump sum payable under the repealed act. Contributions to the Parliamentary Superannuation Fund are at the rate of £48 per annum. To become eligible for a pension, a member must have served at least seven years, any period for which deductions were made under the repealed act counting as service. Where a contributor has completed not less than fourteen years' service and deductions have been made accordingly, the pension is at the rate of £6 per week for ten years and thereafter £3 per week for a further ten years. If the deductions were for less than fourteen years, the benefit is five-sixths of these rates. Where a member has served not less than seven years, with corresponding deductions, the pension is £3 per week for ten years, but if the period of deductions is less than seven years the benefit is £2 10s. per week for ten years. Where service has been for less than seven years, provision exists for refund of contributions plus interest. The widow of an ex-member is eligible for a pension at half the rate for which the contributor had qualified, except that, where a contributor dies while still a member, the pension for the first five years is two-thirds of the relevant ex-member rate.

The Parliament of Tasmania.—*Particulars of Elections, p.* 71. The numbers of electors enrolled for the 1948 House of Assembly elections were 79,544 males and 81,544 females, a total of 161,088 persons. Those who voted in contested electorates numbered 74,697 males (93.91 per cent.) and 73,891 females (90.61 per cent.), a total of 148,588 persons (92.24 per cent.). At the last contested elections for the Legislative Council, in 1947 and 1948, there were, respectively, 12,545 and 21,762 electors on the roll, 10,102 and 17,800 votes recorded and the percentages of enrolled electors who voted 80.53 and 81.79.

§ 3. Administration and Legislation.

Governors-General and Ministries, p. 72.—Recent changes in the Commonwealth Ministry are as follows:—

(*c*) SECOND CHIFLEY GOVERNMENT, FROM 1ST NOVEMBER, 1946.

DEPARTMENTS.	MINISTERS.
Previously *Minister for Supply and Shipping* now *Minister for Shipping and Fuel*	*Senator The Hon. W. P. Ashley (N.S.W.).*
Previously *Minister for Munitions* now *Minister for Supply and Development*	*Senator The Hon. J. I. Armstrong (N.S.W.).*

State Ministers, pp. 74 and 75.—Recent changes in the Victorian, Queensland, Western Australian and Tasmanian Ministries are as follows :—

VICTORIA (7th December, 1948).

Premier and Treasurer—

The Hon. T. T. Hollway.

Minister of Transport, Minister in Charge of Electrical Undertakings, and a Vice-President of the Board of Land and Works—

Colonel The Hon. W. S. Kent Hughes, M.V.O., O.B.E., M.C., E.D.

Attorney-General and Solicitor-General—

The Hon. T. D. Oldham.

Minister of Agriculture, Minister of Forests, and a Vice-President of the Board of Land and Works—

Lieut.-Colonel The Hon. A. H. Dennett.

Commissioner of Public Works and a Vice-President of the Board of Land and Works—

The Hon. J. A. Kennedy, M.L.C.

Minister in Charge of Housing, Minister in Charge of Materials, and Minister in Charge of State Development—

The Hon. A. G. Warner, M.L.C.

Chief Secretary—

Lieut.-Colonel The Hon. W. W. Leggatt, D.S.O., M.C., E.D.

Minister of Public Instruction—

Brigadier R. W. Tovell, C.B.E., D.S.O., E.D.

President of the Board of Land and Works, Commissioner of Crown Lands and Survey, and Minister of Soldier Settlement—

The Hon. R. C. Guthrie.

Minister of Water Supply and Minister of Mines—

The Hon. H. E. Bolte.

Minister of Health—

The Hon. C. P. Gartside, M.L.C.

Minister of Labour—

The Hon. A. E. McDonald, M.L.C.

QUEENSLAND (15th May, 1947).

As from 17th March, 1949, another Cabinet Minister was appointed, making the new total of eleven Ministers. Changes in portfolios were as follows :—

Secretary for Public Lands and Irrigation—

The Hon. T. A. Foley.

Secretary for Mines and Immigration—

The Hon. W. M. Moore.

WESTERN AUSTRALIA (1st April, 1947).

Premier, Treasurer and Minister for the North-West—

The Hon. D. R. McLarty, M.M.

Minister for Education, Local Government and Industrial Development—

The Hon. A. F. Watts.

Minister for Housing, Forests and Native Affairs—

The Hon. R. R. McDonald, K.C.

Minister for Lands and Labour—

The Hon. L. Thorn.

Chief Secretary and Minister for Mines and Police—

The Hon. H. S. W. Parker, D.S.O., M.L.C.

Minister for Works and Water Supply—

The Hon. V. Doney.

Attorney-General and Minister for Health and Fisheries—

The Hon. A. V. R. Abbott.

Minister for Railways and Transport—

The Hon. H. S. Seward.

Honorary Minister for Supply and Shipping—

The Hon. A. F. G. Cardell-Oliver.

Honorary Minister for Agriculture—

The Hon. G. B. Wood, M.L.C.

TASMANIA (25th February, 1948.)

Premier, Minister for Education and Minister administering Hydro-Electric Commission Act—

THE HON. R. COSGROVE.

Attorney-General—

THE HON. R. F. FAGAN.

Treasurer and Minister for Transport—

THE HON. J. L. MADDEN.

Minister for Agriculture and Agricultural Bank—

THE HON. J. J. DWYER, V.C.

Minister for Lands and Works and Minister for Mines—

THE HON. E. E. REECE.

Chief Secretary—

THE HON. A. J. WHITE.

Honorary Ministers—

THE HON. E. R. A. HOWROYD
(Minister for Forests and Minister controlling the Tourist and Immigration Department).
THE HON. R. J. TURNBULL
(Minister for Health).
THE HON. C. B. AYLETT
(Minister for Housing).

§ 5. Cost of Parliamentary Government, pp. 87–8.

The cost of Parliamentary Government, Commonwealth and individual States, for the years 1946–47 and 1947–48 was as follows :—

COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
				TOTAL.				
	£	£	£	£	£	£	£	£
1946–47 ..	800,542	346,970	145,532	171,460	114,360	143,957	77,970	1,800,791
1947–48 ..	905,476	335,006	192,063	158,258	123,412	173,073	71,956	1,959,244
				PER HEAD OF POPULATION.				
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1946–47 ..	2 2	2 4	1 5	3 2	3 7	5 9	6 2	4 9
1947–48 ..	2 4	2 3	1 10	2 10	3 9	6 10	5 6	5 2

The amounts expended under the major headings for all Governments during 1946–47 were :—Governor-General or Governor, £129,181 ; Ministry, £120,348 ; Parliament, £1,028,887 ; Electoral, £511,205. Corresponding figures for 1947–48 were :—£134,546, £146,318, £1,227,547, and £424,020.

§ 6. Government Employees.

Australia, 1948, p. 89.—The number of Government employees in Australia in June, 1948 was as follows :—

GOVERNMENT EMPLOYEES : AUSTRALIA, JUNE, 1948.

Commonwealth Government.			State Government and Semi-Government Bodies.			Local Government Authorities.			Total.		
Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
130,420	38,375	168,795	306,835	52,563	359,398	56,808	3,946	60,754	494,063	94,884	588,94

CHAPTER IV.—LAND TENURE AND SETTLEMENT.

§ 9. Settlement of Returned Service Personnel : 1939-45 War.

War Service Land Settlement Scheme, p. 115.—At 31st December, 1948 an area of 8,313,511 acres had been submitted by the several States for land settlement. Of this, 6,549,220 acres had been approved by the Commonwealth for acquisition, and 5,471,770 acres had actually been acquired by the States. The acreages and holdings allotted to ex-servicemen by the States at 31st December, 1948 were as follows :—New South Wales, 3,337,825 (901) ; Victoria, 349,583 (801) ; Queensland, 80,973 (104) ; South Australia, 19,444 (99) ; Western Australia, 348,587 (208) ; Tasmania, nil ; total, 4,136,412 (2,113).

§ 12. Alienation and Occupation of Crown Lands.

Summary, p. 128.– The alienation and occupation of crown lands in each State and Territory at 31st December, 1947, were as follows :—

ALIENATION AND OCCUPATION OF CROWN LANDS : AUSTRALIA, 31st DECEMBER, 1947.

State or Territory.	Private Lands.				Crown Lands.				Total Area.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.
New South Wales(*a*)	51,439	25.97	14,909	7.53	114,973	58.06	16,716	8.44	198,037
Victoria	29,599	52.62	3,045	5.41	8,676	15.43	14,926	26.54	56,246
Queensland ..	22,655	5.28	5,118	1.19	354,433	82.60	46,914	10.93	429,120
South Australia ..	12,542	5.16	1,352	0.55	136,025	55.92	93,326	38.37	243,245
Western Australia ..	20,208	3.24	12,069	1.93	217,229	34.78	375,082	60.05	624,588
Tasmania ..	6,080	36.24	388	2.31	2,718	16.20	7,592	45.25	16,778
Nor. Territory(*a*) ..	457	0.14	..	..	154,202	46.01	180,458	53.85	335,117
Aust. Cap. Terr. ..	58	9.65	48	7.99	304	50.58	191	31.78	601
Australia ..	143,038	7.51	36,929	1.94	988,560	51.93	735,205	38.62	1,903,732

(*a*) At 30th June.

CHAPTER V.—TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 2. Oversea Shipping and § 5. Interstate Shipping.

Summary of Movements, pp. 131, 137–9.—The following tables summarize oversea and interstate shipping arrivals in the several States during each of the years 1946–47 and 1947–48 :—

OVERSEA AND INTERSTATE SHIPPING : VESSELS AND TONNAGE ENTERED.

State of Entry.	Steam.						Sailing.					
	Oversea.				Interstate.(*a*)		Oversea.		Interstate.(*a*)		Total Entered.	
	Direct.		Via Other States.				Direct and via other States.					
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
						1946–47.						
N.S.W.	424	1,749,885	258	1,264,498	1,133	3,040,541	3	2,697	3	487	1,821	6,058,108
Vic. ..	192	894,409	274	1,381,270	1,116	2,556,115	4	642	93	11,985	1,679	4,844,421
Qld. ..	156	634,468	94	475,257	338	728,121	8	245	2	50	598	1,838,141
S. Aust.	116	489,894	148	725,076	635	1,870,267	..	..	12	951	911	3,086,188
W. Aust.	279	1,337,260	6	30,742	255	1,164,591	..	..	1	166	541	2,532,759
Tas. ..	14	62,235	31	156,020	627	728,751	..	..	79	9,728	751	956,734
N. Terr.	6	14,476	3	8,123	14	28,291	..	..	..	..	23	50,890
Total	1,187	5,182,627	814	4,040,986	4,118	10,116,677	15	3,584	190	23,367	6,324	19,367,241
						1947–48.						
N.S.W.	445	1,698,424	361	1,810,744	1,131	2,977,110	9	253	2	310	1,948	6,486,841
Vic. ..	234	1,059,003	382	1,929,382	1,106	2,676,685	6	974	118	13,678	1,846	5,679,722
Qld. ..	193	657,970	146	730,573	305	586,537	5	54	1	8	650	1,975,142
S. Aust.	136	585,067	207	1,097,725	664	1,961,973	3	4,761	14	1,203	1,024	3,650,729
W. Aust.	396	1,903,511	17	77,243	323	1,394,213	2	2,603	3	436	741	3,378,006
Tas. ..	30	143,478	40	190,554	587	756,705	..	..	130	15,366	787	1,106,103
N. Terr.	14	26,818	1	31	16	24,703	..	..	..	..	31	51,552
Total	1,448	6,074,271	1,154	5,836,252	4,132	10,377,926	25	8,645	268	31,001	7,027	22,328,095

(*a*) Includes oversea vessels on interstate voyages.

§ 6. Tonnage of Cargo.

Oversea and Interstate Cargo, pp. 140-1.—The tables hereunder show particulars of oversea and interstate cargo discharged in and shipped from each State during each of the years 1946–47 and 1947–48 :—

TONNAGE OF CARGO DISCHARGED AND SHIPPED.

State.	Discharged.				Shipped.			
	Oversea.		Interstate.		Oversea.		Interstate.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
	1946–47.							
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
New South Wales ..	1,410	653	2,867	322	1,205	573	3,119	275
Victoria	1,334	455	2,061	239	581	459	578	285
Queensland ..	354	79	392	295	372	83	410	139
South Australia ..	433	152	1,376	215	607	93	2,609	202
Western Australia	554	46	226	177	309	135	118	90
Tasmania ..	80	9	347	304	23	14	420	268
Northern Territory	6	..	9	13	..	..	10	14
Total ..	4,171	1,394	7,278	1,565	3,097	1,357	7,264	1,273
	1947–48.							
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
New South Wales..	1,563	938	2,740	368	1,493	424	3,242	352
Victoria	1,651	596	2,194	172	965	420	555	210
Queensland ..	485	114	276	277	409	60	411	143
South Australia ..	541	182	1,446	186	900	105	2,397	197
Western Australia..	624	78	252	163	720	185	78	73
Tasmania ..	98	8	389	313	40	42	413	285
Northern Territory	20	..	8	5	5	9	13	1
Total ..	4,982	1,916	7,305	1,484	4,532	1,245	7,109	1,261

B. RAILWAYS.

§ 1. General.

Summary of Operations, p. 152.—The following table gives a summary of the operations of all Government railways open for general traffic during the years 1946–47 and 1947–48 :—

GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS.

Particulars.		C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust.
					1946–47.				
Mileage open (route) 30th June, 1947	miles	2,201	6,128	4,748	6,566	2,547	4,348	641	27,179
Capital cost ..	£ mil.	18.3	157.2	53.8	41.1	31.0	27.1	3.1	a334.0
Cost per mile ..	£	8,299	25,658	11,323	6,259	12,162	6,224	4,915	12,289
Gross Revenue ..	£'000	1,099	31,153	13,577	11,033	4,593	4,046	893	66,394
Gross revenue per train-mile ..	..	14s. 6d.	16s. 7d.	17s. 6d.	13s. 8d.	15s. 3d.	12s. 3d.	7s. 11d.	15s. 6d.
Working expenses	£'000.	1,224	25,886	12,916	10,191	5,045	4,424	1,253	60,939
Working expenses per train-mile..	..	16s. 2d.	13s. 9d.	16s. 8d.	12s. 7d.	16s. 9d.	13s. 5d.	11s. 2d.	14s. 3d.
Net revenue ..	£'000.	−125	5,267	661	842	−452	−378	−360	5,455
Net revenue per train-mile ..	..	−1s. 8d.	2s. 10d.	10d.	1s. 1d.	−1s. 6d.	−1s. 2d.	−3s. 3d.	1s. 3d.
Interest ..	£'000.	338	5,126	1,840	1,440	1,013	1,033	100	a10,972
Train-miles run ..	'000	1,513	b 37,500	15,539	b 16,145	6,010	6,594	2,245	85,546
Passenger journeys	'000	222	261,644	170,165	34,188	19,827	13,879	3,253	503,178
Goods, etc. carried	'000 tons	343	17,594	7,562	5,750	3,215	2,577	896	37,937
					1947–48.				
Mileage open (route) 30th June, 1948	miles	2,201	6,128	4,725	6,560	2,547	4,348	614	27,123
Capital cost ..	£ mil.	18.5	165.8	54.4	41.5	31.5	27.5	3.0	a344.6
Cost per mile ..	£	8,404	27,063	11,520	6,327	12,359	6,324	4,773	12,706
Gross revenue ..	£'000.	1,237	37,706	16,322	11,532	5,079	4,562	958	77,396
Gross revenue per train-mile ..	..	15s. 6d.	19s. 4d.	19s.. 5d.	15s. 6d.	16s. 7d.	12s. 10d.	8s. 8d.	17s. 8d.
Working expenses	£'000.	1,439	31,015	15,225	10,641	5,947	5,545	1,455	71,267
Working expenses per train-mile..	..	18s. 0d.	15s. 11d.	18s. 1d.	14s. 4d.	19s. 5d.	15s. 7d.	13s. 2d.	16s. 3d.
Net revenue ..	£'000.	−202	6,691	1,097	891	−868	−983	−497	6,129
Net revenue per train-mile ..	..	−2s. 6d.	3s. 5d.	1s. 4d.	1s. 2d.	−2s. 10d.	−2s. 9d.	−4s. 6d.	1s. 5d.
Interest ..	£'000.	317	5,145	1,862	1,431	1,001	1,046	112	a 10,996
Train-miles run ..	'000	1,602	b 38,958	16,819	14,883	6,134	7,111	2,212	87,719
Passenger journeys	'000	217	263,047	182,209	29,325	19,067	13,928	2,974	510,767
Goods, etc. carried	'000 tons	423	18,518	8,440	5,523	3,560	2,858	817	40,139

(*a*) Includes Commonwealth proportion of Grafton-South Brisbane Line. (*b*) Estimated.

C. TRAMWAYS.

Summary of Operations, p. 168.—The following table is a summary of the operations of all electric tramways in Australia during the years 1946–47 and 1947–48 :—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Mileage open (route) 30th June.	Capital Cost.	Gross Revenue.		Working Expenses.		Interest.	Car-miles Run.	Passenger Journeys.
		Total.	Per Car-mile.	Total.	Per Car-mile.			
Miles.	£'000.	£'000.	*d.*	£'000.	*d.*	£'000.	'000.	Mil.
				1946–47.				
614	27,067	11,210	30.72	9,495	26.02	628	87,581	986.5
				1947–48.				
606	27,293	12,456	34.11	11,392	31.19	654	87,650	943.1

F. MOTOR VEHICLES.

Motor Vehicles on the Register, p. 175.—Motor vehicles registered and licences in force at 30th June, 1947 and 1948, and gross revenue derived during the years 1946–47 and 1947–48, were as follows :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE.

(Excluding Defence Service Vehicles.)

State or Territory.	Motor Vehicles Registered at 30th June.(*a*)					Drivers' and Riders' Licences in force at 30th June.	Gross Revenue Derived from—			
	Motor Cars.(*b*)	Commercial Vehicles. (*c*)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.		Vehicle Registration and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
					1946–47.					
	No.	No.	No.	No.	No.	No.	£	£	£	£
N.S.W. ..	200,320	114,712	25,172	340,204	113.95	568,949	2,525,036	293,946	152,279	2,971,261
Vic. ..	157,461	*d*111,263	26,203	294,927	143.50	437,924	1,912,432	109,495	130,896	2,152,823
Q'land ..	73,993	72,687	11,567	158,247	143.05	204,833	899,600	86,290	97,009	1,082,899
S. Aust. ..	65,252	32,693	11,646	109,591	169.59	148,414	629,300	89,882	11,305	730,487
W. Aust. ..	32,879	31,932	8,199	73,010	145.23	94,574	357,305	31,879	44,352	433,536
Tas. ..	18,493	9,047	3,611	31,151	121.15	38,022	222,286	19,011	40,045	281,342
Nor. Terr...	320	2,491	179	2,990	275.17	2,672	4,146	1,424	..	5,570
A.C.T. ..	1,682	821	135	2,638	156.05	4,377	12,127	2,066	115	14,308
Total ..	550,400	375,646	86,712	1,012,758	133.59	1,499,765	6,562,232	633,993	476,001	7,672,226
					1947–48.					
	No.	No.	No.	No.	No.	No.	£	£	£	£
N.S.W. ..	215,332	128,849	30,076	374,257	123.71	598,512	2,786,932	307,233	416,205	3,510,370
Vic. ..	171,203	*d*121,097	29,143	321,443	153.75	470,971	2,119,859	117,758	217,901	2,455,518
Q'land ..	77,936	79,782	13,391	171,109	151.78	221,497	972,589	86,515	195,243	1,254,347
S. Aust. ..	70,672	35,641	14,265	120,578	183.24	159,003	683,067	78,058	27,232	788,357
W. Aust. ..	35,596	35,001	8,877	79,474	154.23	103,438	609,219	36,849	50,827	696,895
Tas. ..	19,905	10,239	4,101	34,245	130.52	40,388	245,107	20,194	48,255	313,556
Nor. Terr...	592	2,513	149	3,254	261.20	2,880	6,090	1,379	..	7,469
A.C.T. ..	1,841	950	194	2,985	158.96	4,705	14,431	2,308	135	16,874
Total ..	593,077	414,072	100,196	1,107,345	143.62	1,601,394	7,437,294	650,294	955,798	9,043,386

(*a*) Excludes (1947–48 figures in parentheses) trailers, 45,771 (52,996), road tractors, etc., 4,508 (5,814) and dealers' plates, 2,983 (3,573). (*b*) Includes taxis and hire cars. (*c*) Includes lorries, vans, buses and utility trucks. (*d*) Includes vehicles registered as primary producers' vehicles.

New Vehicles Registered, p. 177.—New vehicles registered during the years 1946–47 and 1947–48 were as follows :—

NEW MOTOR VEHICLES REGISTERED.

(Excluding Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.(*b*)	W.A.	Tas.	A.C.T.	Total.
				1946–47.				
Motor Cars	8,005	6,136	2,763	2,175	1,352	741	65	21,237
Commercial Vehicles, etc.	5,603	(*a*) 4,643	2,728	1,530	1,118	667	28	16,317
Motor Cycles	2,850	1,683	1,138	1,397	673	472	7	8,220
Total	16,458	12,462	6,629	5,102	3,143	1,880	100	45,774
				1947–48.				
Motor Cars	16,800	12,170	4,785	4,357	2,971	1,541	121	42,745
Commercial Vehicles, etc.	9,427	(*a*)9,354	4,252	2,604	1,987	1,084	61	28,769
Motor Cycles	4,451	3,480	1,958	2,697	1,059	621	42	14,308
Total	30,678	25,004	10,995	9,658	6,017	3,246	224	85,822

(*a*) Includes vehicles registered as primary producers' vehicles. (*b*) Excludes Northern Territory.

H. AVIATION.

Statistical Summary, p. 195.—The following table gives a summary of civil aviation in Australia in 1946–47 and 1947–48 :—

CIVIL AVIATION : REGULAR INTERNAL SERVICES.

Year.	Registered Aircraft Owners. (*a*)	Registered Aircraft. (*a*)	Pilots' Licences. (*a*) Private.	Pilots' Licences. (*a*) Commercial.	Hours Flown.	Approx. Mileage.	Passengers Carried.	Weight of Goods Carried.	Gross Weight Mails Carried.	Accidents. Killed.	Accidents. Injured.
	No.	No.	No.	No.	No.	'000 miles.	No.	'000 lb.	'000 lb.	No.	No.
1946–47	323	643	(*b*) 600	*bc* 499	170,138	24,485	871,471	24,436	941	15	17
1947–48	334	670	614	(*d*) 495	229,767	33,814	1,222,459	54,556	1,015	13	27

(*a*) At 30th June. (*b*) At 1st April, 1948. (*c*) In addition, there were licences for 939 student pilots, 341 1st class airline transport pilots, 25 2nd class and 372 3rd class. (*d*) In addition, there were licences for 1,114 student pilots, 361 1st class airline transport pilots, 35 2nd class and 360 3rd class.

The following is a summary of the operations of Australian and international oversea services to and from Australia during the years 1938–39 and 1944–45 to 1947–48 :—

CIVIL AVIATION : OVERSEA SERVICES.

Particulars.		1938–39.	1944–45.	1945–46.	1946–47.	1947–48.
Route miles	No.	6,985	15,969	(a) 10,471	19,459	36,099
Hours flown ..	,,	12,686	11,561	22,645	32,633	39,488
Miles flown	'000	1,736	1,789	4,265	5,921	7,555
Paying passengers ..	No.	5,350	8,137	15,702	31,055	41,124
Paying passenger-miles	'000	7,335	14,708	32,905	75,225	122,678
Freight—						
Actual tons ..	tons	6	70	152	349	660
Ton-miles ..	'000	(b)	168	406	978	2,630
Mail—						
Actual tons ..	tons	(b)	264	564	465	638
Ton-miles ..	'000	(b)	730	2,032	2,112	3,408

(a) Excludes Perth-Karachi Lancastrian service, now incorporated in route Sydney-Karachi via Singapore. (b) Not available.

I. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. General to § 5. Telephones.

Summary of Operations, pp. 196–216.—The following table is a summary of the operations of the Postmaster-General's Department during the year 1946–47 :—

POSTMASTER-GENERAL'S DEPARTMENT : SUMMARY OF OPERATIONS, 1946–47.

State.	Gross Revenue.	Expenditure.	Postal Matter Handled.				Money Orders Issued, Value.	Postal Notes Issued, Value.	Telegrams Despatched.	Telephones.	
			Letters, Cards.	Newspapers, Packets.	Parcels.	Registered Articles.				Lines Connected. (a)	Instruments Connected. (a)
	£'000.	£'000.	mil.	mil.	mil.	mil.	£'000.	£'000.	No.	'000.	'000.
N.S.W. ..	11,822	10,388	397.0	98.8	7.7	8.8	12,809	4,009	12,031	253	353
Vic. ..	8,730	7,572	280.9	50.6	5.6	5.0	6,218	3,090	7,984	203	287
Q'land ..	4,119	4,024	126.2	28.6	3.4	2.9	4,285	989	6,076	83	114
S. Aust...	2,427	2,229	79.7	12.0	1.9	1.3	1,745	714	3,286	56	78
W. Aust.	1,845	1,663	60.1	14.0	1.3	1.2	1,796	498	3,400	34	48
Tas. ..	859	861	46.2	6.3	0.4	0.7	1,065	236	952	19	25
Aust.	29,802	b32,724	990.1	210.3	20.3	19.9	27,918	9,536	33,729	648	905

(a) At 30th June, 1947. (b) Includes £5,987,000 Central Office expenditure.

§ 6. Radio Telegraphy and Telephony, p. 216.

Radio-communication Stations Authorized.—A change has been made in the arrangement of the statistics of the different classes of the wireless licences issued by the Postmaster-General's Department for stations in the States and Territories of the Commonwealth, the new particulars referring to "stations authorized" instead of "licences issued". The change has been made necessary mainly because of the need for inclusion of certain stations authorized in recent times, but for which licences have not been issued (e.g. stations established by the Postmaster-General's Department, services conducted by the Administration of Papua—New Guinea and aeronautical stations of the Department of Civil Aviation). Another factor in the change is that, in a number of instances, single licences have been issued for a group of stations. Figures representing stations authorized for use in ships and in aircraft are shown separately as totals for the Commonwealth and Territories combined, because it is no longer practicable to classify them according to States, etc., as hitherto. Figures relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners are shown in the two tables following.

RADIO-COMMUNICATION STATIONS AUTHORIZED.

State for which Authorized.	Class of Station.									Grand Total.
	Transmitting and Receiving.						Receiving only.			
	Aeronautical. (a)	Coast. (b)	Land. (c)	Mobile (general). (d)	Miscellaneous.	Total.	Land. (c)	Mobile (general). (d)	Total.	
30TH JUNE, 1947.										
New South Wales	8	1	143	452	14	618	87	36	123	741
Victoria ..	4	1	79	200	2	286	200	122	322	608
Queensland ..	14	6	159	37	2	218	11	67	78	296
South Australia ..	6	1	81	42	3	133	..	..	..	133
Western Australia	12	5	141	22	1	181	28	6	34	215
Tasmania ..	5	1	21	8	3	38	..	..	..	38
Nor. Terr. ..	5	1	85	18	..	109	..	..	..	109
Aust. Cap. Terr.	1	..	5	23	1	30	..	2	2	32
Total, Australia	55	16	714	802	26	1,613	326	233	559	2,172
Papua ..	1	1	29	19	..	50	..	..	..	50
New Guinea ..	3	3	45	6	..	57	..	..	..	57
Grand Total ..	59	20	788	827	26	1,720	326	233	559	e2,279
30th JUNE, 1948.										
New South Wales	8	1	176	499	33	717	72	36	108	825
Victoria ..	4	1	122	351	11	489	202	132	334	823
Queensland ..	14	6	201	127	9	357	29	82	111	468
South Australia ..	6	1	99	58	4	168	..	..	..	168
Western Australia	12	5	180	71	7	275	28	7	35	310
Tasmania ..	5	1	27	9	3	45	..	..	..	45
Nor. Terr. ..	5	1	92	29	..	127	..	..	..	127
Aust. Cap. Terr.	1	..	5	43	1	50	..	2	2	52
Total, Australia	55	16	902	1,187	68	2,228	331	259	590	2,818
Papua ..	1	2	43	21	..	67	..	..	..	67
New Guinea ..	3	6	64	..	..	73	..	..	..	73
Grand Total ..	59	24	1,009	1,208	68	2,368	331	259	590	e 2,958

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations, and stations comprising small portable apparatus used for various purposes. (e) Excludes 87 (168) aircraft stations and 219 (345) ship stations 1947 (1948).

Broadcast Licences.—The following tables show the number of broadcast licences issued at 30th June, 1947 and 1948.

BROADCAST LICENCES ISSUED.

State in which Issued.	Class of Licence.				
	Broadcasting.		Broadcast Listeners'.		Experimental.
	National Stations.	Commercial Stations.	One Receiver.	More than one Receiver.	
30TH JUNE, 1947.					
New South Wales	7	35	640,406	35,519	680
Victoria	(a) 7	19	475,215	24,729	658
Queensland(b)	(a) 9	20	221,345	6,721	237
South Australia	3	8	164,995	15,376	214
Western Australia	(a) 6	10	114,798	6,351	155
Tasmania	3	8	57,577	4,097	68
Northern Territory	1	..	528	10	15
Australian Capital Territory	1	1	3,412	168	9
Total	37	101	1,678,276	92,971	2,036
30TH JUNE, 1948.					
New South Wales	7	35	646,976	48,526	906
Victoria	(a) 7	19	469,437	35,669	796
Queensland(b)	(a) 9	20	230,028	9,314	273
South Australia	3	8	175,232	21,104	261
Western Australia	(a) 6	11	120,240	8,463	171
Tasmania	3	8	57,568	5,512	91
Northern Territory	1	..	967	23	13
Australian Capital Territory	1	1	3,522	235	13
Total	37	102	1,703,970	128,846	(c)2,536

(a) Includes Short Wave Stations: Victoria, 3; Queensland, 1; Western Australia, 1. (b) Includes Papua. (c) Includes 12 licences in external territories.

CHAPTER VI.—EDUCATION.

§ 3. State Schools, § 4. Private Schools and § 9. Technical Education.

Returns for Year 1946, pp. 229, 232 5 and 249.—The following table gives a summary of State, Private and Technical schools in each State for the year 1946 :—

EDUCATION : SUMMARY, 1946.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
State Schools—									
Schools	No.	2,686	2,336	1,541	786	582	335	5	8,271
Teachers	,,	11,869	9,019	5,275	2,935	2,304	1,332	19	32,753
Net enrolment	,,	369,928	210,755	138,825	73,916	a 58,987	33,805	595	886,811
Average weekly enrolment	,,	336,615	201,037	134,142	70,503	58,987	32,462	595	834,341
Average daily attendance	,,	291,358	179,755	112,572	64,429	53,411	28,987	546	731,058
Net Expenditure—									
Maintenance	£'000	6,162	3,920	2,267	1,234	1,083	560	10	15,236
Buildings	,,	570	377	149	152	138	116	2	1,504
Total	,,	6,732	4,297	2,416	1,386	1,221	676	12	16,740
Private Schools—									
Schools	No.	728	493	235	145	166	58	2	1,827
Teachers	,,	5,479	2,998	1,685	884	771	332	8	12,157
Enrolment	..	111,770	84,379	37,679	16,310	18,204	7,966	253	276,561
Average attendance	,,	97,428	82,039	34,512	14,443	16,909	7,175	220	252,726
Technical Schools—									
Schools	No.	36	32	12	20	10	7	..	117
Teachers	,,	2,362	2,291	293	504	291	319	..	6,060
Students	,,	49,952	41,942	11,912	16,175	9,750	4,207	..	133,938
Total Expenditure	£'000	791	921	158	146	98	102	..	2,216

(a) Average weekly enrolment.

§ 6. Universities.

Teaching and Research Staff, etc., pp. 236–8.—The following table gives a summary of the University statistics for the year 1947 :—

UNIVERSITIES : SUMMARY, 1947.

Particulars.	University—						University Colleges.		Total.
	Sydney.	Melbourne.	Q'land.	Adelaide.	W.A.	Tas.	New England.	Canberra.	
Teaching and Research Staff—									
Professors	49	34	20	24	14	14	..	..	155
Other	579	525	305	217	133	45	59	29	1,892
Total Students	9,986	9,127	3,811	4,608	1,704	741	227	273	30,477
Commonwealth Reconstruction Training Students	4,065	4,129	1,584	1,486	621	288	54	174	12,401
Degrees Conferred ..	1,079	806	201	277	180	57	..	..	2,600
Receipts—General Activities—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Government Grants ..	238	233	124	112	87	45	37	18	894
Total	595	478	230	225	110	57	54	21	1,770
Extra Activities ..	124	220	49	49	64	18	..	3	527
Expenditure — General Activities—									
Administration ..	54	52	23	11	12	7	7	3	169
Teaching	481	362	165	165	81	33	20	10	1,317
Total	634	566	232	228	124	59	54	14	1,911
Extra Activities ..	103	195	45	47	57	14	..	3	464

CHAPTER VII.—PUBLIC JUSTICE.

§ 1. Lower (Magistrates') Courts, § 2. Superior Courts and § 3. Civil Courts.

Convictions for Serious Crime, etc., pp. 268 271, 274 and 276.—The following table gives a summary of convictions at Magistrates' and Superior Courts, and for drunkenness, petitions for divorce, nullity of marriage and judicial separations, and decrees made absolute for the year 1947 :—

MAGISTRATES', SUPERIOR AND CIVIL COURTS, 1947.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.Ter.	A.C.T.	Aust.
Convictions for serious crime at Magistrates' Courts..	14,626	5,028	*a* 2,241	*a* 1,579	2,441	937	(*a*) 99	139	27,090
Committals to Superior Courts	3,148	1,783	(*a*) 433	(*a*) 405	208	100	(*a*) 11	31	6,119
Convictions at Superior Courts	*a* 1,297	785	(*a*) 270	246	102	64	(*a*) 48	15	2,827
Drunkenness Convictions..	67,324	14,850	*a* 17,258	*a* 4,908	4,250	436	(*a*) 348	279	109,653
Rate per 10,000 Population	225.5	72.3	155.1	75.2	84.5	16.9	307.8	165.0	144.4
Divorce—Petitions ..	4,128	1,959	953	734	808	287	7	22	8,898
Decrees made absolute(*b*)	3,821	2,291	933	690	814	210	7	25	8,791

(*a*) Year ended 30th June following. (*b*) Includes nullity of marriage.

CHAPTER VIII.—PUBLIC BENEVOLENCE, ETC.

B. THE LARGER CHARITIES OF AUSTRALIA.

§ 1. Public Hospitals (other than Mental Hospitals).

Number, Staff, pp. 287–8.—The following table gives a summary of details relating to Public Hospitals in each State for the year 1946–47 :—

PUBLIC HOSPITALS : SUMMARY, 1946–47.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
Hospitals .. No.	227	89	120	59	85	23	1	604
In-patients treated during year .. No.	298,031	105,311	158,115	52,388	55,611	30,935	3,097	703,488
Inmates at end of year ,,	11,965	5,382	5,640	2,170	2,118	1,207	104	28,586
Average daily resident ,,	12,745	5,439	5,519	2,273	2,093	1,106	92	29,267
Revenue—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Government aid ..	3,096	1,752	1,669	567	696	283	41	8,104
Commonwealth hospital benefits	669	546	526	184	210	99	10	2,244
Fees	946	600	215	131	129	80	5	2,106
Public subscriptions ..	224	649	5	66	26	10	..	980
Total	5,071	3,734	2,456	1,067	1,072	487	57	13,944
Expenditure—								
Salaries and wages ..	3,069	1,674	1,276	510	446	279	26	7,280
Buildings	213	87	56	62	20	12	2	452
Total	5,265	3,505	2,468	1,064	1,057	484	57	13,900

C. SOCIAL SERVICES BENEFITS.

§ 1. Age and Invalid Pensions, § 2. Child Endowment, § 3. Widows' Pensions and § 4. Maternity Allowances.

General, pp. 298–303.—The following table gives a summary of age and invalid and widows' pensions, child endowment and maternity allowances for the year 1947–48 :—

SOCIAL SERVICES : SUMMARY, 1947–48.

Particulars.	N.S.W. (*a*)	Vic.	Q'land.	S. Aust. (*b*)	W.Aust.	Tas.	Aust.
Age and Invalid Pensions—							
Age Pensions in force No.	123,763	78,057	40,806	27,370	22,210	10,648	302,854
Invalid Pensions in force ,,	33,110	15,165	11,808	5,558	4,387	3,045	73,073
Amount paid in Pensions £'000	15,061	9,145	5,253	3,142	2,566	1,359	36,526
Child Endowment—							
Family claims in force No.	233,826	148,249	89,882	50,058	42,634	21,700	*c* 586,415
Endowed children .. ,,	407,368	251,145	169,060	84,539	75,186	42,375	*c*1,029,777
Amount paid .. £'000	7,603	4,842	3,105	1,606	1,449	820	(*c*) 19,426
Widows' Pensions—							
Pensions in force .. No.	17,233	11,259	6,576	3,781	2,719	1,457	43,025
Children for whom pensions paid ,,	7,764	3,990	2,870	1,308	1,131	669	17,732
Amount paid .. £'000	1,583	1,022	581	339	242	137	3,904
Maternity Allowances—							
Claims paid .. No.	68,116	46,027	27,920	15,856	12,553	7,074	(*d*) 177,566
Amount paid .. £'000	1,090	744	451	255	200	114	2,854

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory. (*c*) Includes 66 claims and 104 children abroad, amount paid, £801. (*d*) Includes 20 claims paid abroad.

§ 5. Commonwealth Unemployment and Sickness Benefits.

Statistics, pp. 305–6.—The following table shows the number of persons in each State admitted to benefit during the year, and on benefit at the end of the year, 1947–48 :—

UNEMPLOYMENT AND SICKNESS BENEFITS : PERSONS ADMITTED TO AND ON BENEFIT, 1947–48.

State.	Unemployment.		Sickness.		Special.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
ADMITTED TO BENEFIT, 1947–48.									
N.S. Wales(*a*) ..	3,234	282	20,006	5,999	1,082	320	24,322	6,601	30,923
Victoria ..	971	58	12,742	4,363	1,736	607	15,449	5,028	20,477
Queensland ..	20,262	965	8,273	1,961	422	100	28,957	3,026	31,983
Sth. Australia(*b*)	231	3	5,753	1,316	114	38	6,098	1,357	7,455
W. Australia ..	2,393	78	4,826	1,396	586	219	7,805	1,693	9,498
Tasmania ..	184	1	2,347	504	58	44	2,589	549	3,138
Total ..	27,275	1,387	53,947	15,539	3,998	1,328	85,220	18,254	103,474
ON BENEFIT, 30TH JUNE, 1948.									
N.S. Wales(*a*) ..	298	41	2,855	939	290	211	3,443	1,191	4,634
Victoria ..	65	1	1,757	749	71	99	1,893	849	2,742
Queensland ..	1,102	71	1,155	322	43	73	2,300	466	2,766
Sth. Australia(*b*)	19	1	742	198	15	31	776	230	1,006
W. Australia ..	206	6	570	206	26	39	802	251	1,053
Tasmania ..	28	..	347	100	13	38	388	138	526
Total ..	1,718	120	7,426	2,514	458	491	9,602	3,125	12,727

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

The following table shows the amounts paid and the average weekly payment per beneficiary in each class of benefit in each State during 1947–48, and also the Australian totals for 1945–46 to 1947–48 :—

UNEMPLOYMENT AND SICKNESS BENEFITS : PAYMENTS, 1947–48.

State.	Unemployment.		Sickness.		Special.		Total.	
	Amount.	Average Weekly Payment per Beneficiary.	Amount.	Average Weekly Payment per Beneficiary.	Amount.	Average Weekly Payment per Beneficiary.	Amount.	Average Weekly Payment per Beneficiary.
	£	£	£	£	£	£	£	£
N.S. Wales(*a*) ..	60,499	1.70	302,987	1.56	14,434	1.14	377,920	1.56
Victoria ..	16,639	1.98	209,128	1.61	20,018	1.32	245,785	1.60
Queensland ..	248,357	1.79	103,521	1.38	9,604	1.45	361,482	1.64
Sth. Australia(*b*)	4,038	1.48	79,110	1.56	3,702	1.34	86,850	1.54
W. Australia ..	37,192	1.70	58,255	1.47	6,149	1.32	101,596	1.53
Tasmania ..	2,904	1.70	38,326	1.62	2,611	1.03	43,841	1.57
Total 1947–48	369,629	1.77	791,327	1.54	56,518	1.27	1,217,474	1.59
,, 1946–47	910,822	1.87	711,364	1.63	27,939	1.37	1,650,125	1.75
,, 1945–46	525,070	1.91	525,869	1.81	4,273	0.73	1,055,212	1.85

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

CHAPTER XI.—TRADE.

NOTE.—The values in the following tables are expressed in Australian currency, but, unlike the figures in Chapter XI.—Trade of this issue, they represent f.o.b. value at port of shipment for *both* imports and exports. The figures for imports therefore *do not include the statutory* 10 *per centum imposed for value for duty purposes* which is included in the import figures of Chapter XI. This change is in accordance with the amendment to the Customs Act 1901–1936 referred to at the top of p. 397 *ante*.

§ 7. Oversea Trade.

Summary of Movements, pp. 399 and 400.—The table hereunder is a summary of the total oversea trade movements of Australia during the year 1947–48.

TOTAL OVERSEA TRADE : AUSTRALIA, 1947–48.

Item.	Australian Currency Values.
	£A'000 f.o.b.
Merchandise—Exports	404,988
Imports	338,085
Commodity Balance	66,903
Bullion and Specie—Exports	4,966
Imports	1,661
Bullion and Specie Balance	3,305
Total Balance	70,208

§ 8. Direction of Oversea Trade.

Imports according to Country of Origin and Exports according to Country of Destination, pp. 402 and 404.—The following table shows particulars of the values of total imports and total exports of Australia, including bullion and specie, according to countries of origin or of destination, for the year 1947–48 :—

TOTAL OVERSEA TRADE, AUSTRALIA : COUNTRIES OF ORIGIN OR OF DESTINATION, 1947–48.

Country of Origin or of Destination.	Imports.	Exports.
	£A'000 f.o.b.	£A'000 f.o.b.
United Kingdom	132,238	155,933
Canada	15,341	5,009
Ceylon	8,133	10,213
India	26,698	26,689
Malaya (British)	3,863	7,785
New Zealand	4,249	15,260
Other British Countries	17,231	41,932
Total British Countries	207,753	262,821

TOTAL OVERSEA TRADE, AUSTRALIA: COUNTRIES OF ORIGIN OR OF DESTINATION, 1947–48—*continued.*

Country of Origin or of Destination.	Imports.	Exports.
	£A'000 f.o.b.	£A'000 f.o.b.
Arabia	5,819	211
Belgium	5,213	19,261
China	1,667	2,757
France	3,118	36,483
Italy	2,710	11,860
Netherlands	2,595	3,373
Netherlands East Indies	4,429	132
Norway	3,164	1,024
Persia	10,989	432
Sweden	4,905	3,037
Switzerland	1,950	1,663
United States of America	66,830	35,074
Other Foreign Countries	12,003	31,826
Total Foreign Countries	125,392	147,133
Outside packages	6,601	..
Total	339,746	409,954

§ 11. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, pp. 412–3.—The following table shows the values of total imports and total exports in statistical classes for the year 1947–48 :—

TOTAL OVERSEA TRADE, AUSTRALIA: CLASSES, 1947–48.

Classes.	Imports.	Exports.
	£A'000 f.o.b.	£A'000 f.o.b.
I. Animal foodstuffs, etc.	3,696	57,790
II. Vegetable foodstuffs, non-alcoholic beverages, etc.	16,521	124,182
III. Alcoholic liquors, etc.	762	2,086
IV. Tobacco, etc.	7,721	222
V. Live animals	385	502
VI. Animal substances, etc.	3,440	161,783
VII. Vegetable substances, etc.	11,470	1,095
VIII. Apparel, textiles, etc.	96,065	6,871
IX. Oils, fats and waxes	34,757	2,063
X. Paints and varnishes	1,638	617
XI. Stones and minerals, etc.	2,837	5,201
XII. Metals, metal manufactures and machinery	85,379	29,556
XIII. Rubber and leather, etc.	5,352	1,961
XIV. Wood and wicker, etc.	4,877	1,730
XV. Earthenware, etc.	7,251	516
XVI. Paper and stationery	23,383	850
XVII. Jewellery, etc.	4·131	392
XVIII. Optical, surgical and scientific instruments	4,410	866
XIX. Drugs, chemicals, etc.	11,036	3,272
XX. Miscellaneous	12,974	3,433
XXI. Gold and silver, and bronze specie	1,661	4,966
Total	339,746	409,954

§ 15. Australian Index of Export Prices.

Monthly Index (Fixed Weights), p. 426.—The following table shows export price index-numbers for the year 1947–48 and the months of July, 1947 to December, 1948 :—

EXPORT PRICE INDEXES : AUSTRALIA.

SIMPLE AGGREGATIVE INDEX : FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(*Base of each section : Average of three years ended June,* 1939 = 1,000.)

Period.	Wool.	Wheat.	Butter.	Metals. (*a*)	Meats. (*b*)	Sugar.	Dried Fruits. (*c*)	Tallow.	Hides. (*d*)	Gold.	All Groups.	
											Excluding Gold.	Including Gold.
(*e*)	45.63	17.06	11.36	6.83	6.63	2.40	1.81	0.64	0.66	6.98	..	100.00
(*f*)	49.05	18.34	12.21	7.34	7.13	2.58	1.94	0.69	0.72	..	100.00	..
1947–48 ..	2,901	4,192	1,935	3,723	1,464	3,203	1,566	3,607	3,643	1,223	2,968	2,847
1947–48—												
July	1,923	3,676	1,734	3,515	1,446	3,004	1,569	3,038	3,221	1,223	2,340	2,263
August ..	2,376	3,790	1,734	3,493	1,446	3,004	1,569	3,038	3,366	1,223	2,583	2,488
September ..	2,451	3,861	1,734	3,523	1,446	3,004	1,569	3,038	3,366	1,223	2,636	2,536
October ..	2,564	3,815	1,734	3,584	1,446	3,004	1,569	3,797	3,678	1,223	2,693	2,591
November ..	2,866	3,829	2,035	3,557	1,446	3,004	1,569	3,797	3,678	1,223	2,879	2,764
December ..	*g* 2,866	4,013	2,035	3,589	1,446	3,004	1,569	3,797	3,678	1,223	2,915	2,797
January ..	3,243	4,274	2,035	3,685	1,446	3,402	1,569	3,797	3,678	1,223	3,166	3,032
February ..	3,394	4,461	2,035	3,621	1,446	3,402	1,569	1,797	4,043	1,223	3,274	3,130
March ..	*g* 3,168	4,558	2,035	3,789	1,446	3,402	1,557	3,797	3,873	1,223	3,191	3,054
April ..	*h* 3,092	4,597	2,035	4,021	1,446	3,402	1,557	3,797	3,834	1,223	3,178	3,042
May ..	*h* 3,281	4,719	2,035	4,055	1,554	3,402	1,557	3,797	3,652	1,223	3,301	3,157
June ..	*h* 3,583	4,712	2,035	4,246	1,554	3,402	1,572	3,797	3,652	1,223	3,462	3,307
1948–49—												
July	*h* 3,470	4,710	2,330	4,388	1,554	3,402	1,572	3,797	3,391	1,223	3,451	3,296
August ..	*g* 3,470	4,609	2,330	4,427	1,554	3,402	1,572	3,797	3,305	1,223	3,436	3,281
September ..	*h* 3,545	4,480	2,330	4,380	1,554	3,402	1,572	3,797	3,417	1,223	3,446	3,291
October ..	*h* 3,281	4,414	2,330	4,728	1,757	3,402	1,572	4,172	3,847	1,223	3,350	3,200
November ..	*h* 3,658	*i* 4,385	2,330	4,687	1,757	3,402	1,572	4,172	4,186	1,223	3,529	3,369
December ..	*h* 3,997	*i* 4,340	2,330	4,805	1,757	3,402	1,572	4,172	4,199	1,223	3,696	3,524

(*a*) Non-Ferrous—Silver, Copper, Tin, Spelter, Lead. (*b*) Beef, Lamb, Mutton, Pork. (*c*) Sultanas, Lexias, Currants. (*d*) Cattle Hides, Calf Skins. (*e*) Percentage distribution of Base Aggregate for "All Groups (including Gold)"—applicable from 1936–37. (*f*) Percentage distribution of Base Aggregate for "All Groups (excluding Gold)"—applicable from 1936–37. (*g*) Nominal. (*h*) Subject to revision. (*i*) Nominal, pending adjustment to wheat values in accordance with new contract with United Kingdom.

Monthly Index (Changing Weights), p. 427.—The next table shows index-numbers for months and periods ending between July, 1947 and December, 1948 :—

MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS) : AUSTRALIA.

(*Base : Weighted Average Price Level in corresponding months of preceding year* = 1,000.)

Month.	1947–48.		1948–49.	
	Month stated compared with same month of preceding year.	*Period of trade year ending in month stated* compared with same period of preceding year.	*Month stated* compared with same month of preceding year.	*Period of trade year ending in month stated* compared with same period of preceding year.
July	1,458	1,458	1,511	1,511
August	1,607	1,535	1,302	1,422
September	1,441	1,502	1,265	1,375
October	1,433	1,480	1,244	1,336
November	1,462	1,476	1,232	1,309
December	1,462	1,474	1,299	1,307
January	1,553	1,488	..	..
February	1,551	1,497	..	..
March	1,499	1,498	..	..
April	1,422	1,489	..	..
May	1,487	1,489	..	..
June	1,520	1,493	..	..

CHAPTER XII.—LABOUR, WAGES AND PRICES.

A. RETAIL PRICES AND PRICE INDEXES.

§ 7. Tabular Statements of Retail Price Index-Numbers.

All Items (" C " Series) Retail Price Index p. 447.—The following table shows the " C " Series index-numbers for the December quarters, 1947 and 1948 for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items :—

ALL ITEMS (" C " SERIES) RETAIL PRICE INDEX-NUMBERS (*a*) : CAPITAL CITIES.

(*Base of each Group : Weighted average of Six Capital Cities*, 1923–27 = 1,000.)

December Quarter—	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (*b*)
GROUP I.—FOOD AND GROCERIES.							
1947	1,138	1,160	1,092	1,112	1,132	1,180	1,138
1948	1,326	1,355	1,280	1,305	1,324	1,416	1,330
GROUP II.—HOUSING (4 AND 5 ROOMS) (*c*).							
1947	1,045	974	864	899	887	936	977
1948	1,047	974	866	905	890	938	980
GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING (" B " SERIES INDEX).							
1947	1,099	1,084	1,001	1,026	1,034	1,082	1,073
1948	1,214	1,203	1,116	1,146	1,152	1,226	1,190
GROUP III.—CLOTHING.							
1947	1,639	1,649	1,619	1,618	1,647	1,653	1,639
1948	1,831	1,801	1,817	1,809	1,835	1,807	1,818
GROUP IV.—MISCELLANEOUS.							
1947	1,245	1,201	1,157	1,266	1,160	1,140	1,217
1948	1,279	1,273	1,249	1,350	1,242	1,191	1,277
GROUPS I. TO IV.—ALL ITEMS (" C " SERIES INDEX).							
1947	1,242	1,227	1,163	1,198	1,189	1,216	1,221
1948	1,359	1,345	1,291	1,327	1,316	1,344	1,341

(*a*) The index-numbers given in the separate parts of the table cannot be compared with each other in order to show the relative cost of food and groceries, housing, etc., since the cost in 1925–27 in each group or combination is made equal to 1,000. (*b*) Weighted average. (*c*) The rent index-numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. *See* footnote (*b*) on page 443.

B. WHOLESALE PRICES AND PRICE INDEXES.

§ 1. Melbourne Wholesale Price Index.

Index-numbers, p. 456.—The table hereunder gives the index-numbers for each group, and for all groups combined, of those commodities included in the series for the years 1947 and 1948 :—

INDEX-NUMBERS (*a*) : MELBOURNE WHOLESALE PRICES.

(*Base of each Group : Year* 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials.	VIII. Chemicals.	All Groups.
1947	2,390	2,690	2,019	1,763	2,174	2,748	3,800	2,843	2,360
1948	2,829	3,619	2,383	2,104	2,435	2,976	4,631	3,180	2,824

(*a*) Figures are not directly comparable horizontally.

§ 2. Basic Materials and Foodstuffs.

Index-numbers, pp. 457–8.—Index-numbers for each group of commodities and for all groups combined for the new index of wholesale prices of basic materials and foodstuffs are shown below for each of the twelve months and year 1947–48 and for the six months July to December, 1948.

INDEX-NUMBERS (*a*) : BASIC MATERIALS AND FOODSTUFFS.

(*Base of each Group : Average* 3 *years ended June,* 1939 = 1,000.)

Period.	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Foodstuffs and Tobacco.	Goods principally Imported. (*b*)	Goods principally Home Produced.	All Groups.
1947–48—										
July	1,353	1,519	2,129	1,412	1,149	1,851	1,438	1,831	1,336	1,482
August ..	1,353	1,536	2,423	1,412	1,149	1,853	1,439	1,857	1,341	1,493
September ..	1,358	1,578	2,515	1,424	1,216	1,853	1,452	1,890	1,351	1,509
October ..	1,359	1,578	2,582	1,434	1,216	1,862	1,484	1,922	1,366	1,529
November ..	1,392	1,578	2,806	1,434	1,296	1,900	1,514	1,947	1,402	1,562
December ..	1,510	1,632	2,795	1,434	1,294	1,908	1,537	1,954	1,453	1,601
January ..	1,513	1,616	3,027	1,529	1,307	1,914	1,567	1,928	1,500	1,626
February ..	1,513	1,616	3,123	1,529	1,315	1,923	1,588	1,933	1,518	1,640
March ..	1,514	1,654	2,991	1,529	1,266	1,918	1,588	1,950	1,512	1,640
April ..	1,514	1,659	3,004	1,532	1,265	1,922	1,589	1,952	1,514	1,642
May ..	1,571	1,659	3,199	1,532	1,319	1,934	1,588	1,959	1,533	1,658
June ..	1,571	1,659	3,403	1,533	1,345	1,944	1,588	1,960	1,541	1,664
Year ..	1,460	1,607	2,833	1,478	1,262	1,899	1,531	1,924	1,447	1,587
1948–49—										
July	1,651	1,724	3,323	1,533	1,361	1,948	1,611	2,000	1,571	1,697
August ..	1,651	1,724	3,328	1,537	1,347	1,952	1,696	2,025	1,627	1,744
September ..	1,697	1,733	3,371	1,538	1,347	1,964	1,687	2,017	1,637	1,749
October ..	1,697	1,734	3,497	1,593	1,347	1,964	1,685	2,015	1,633	1,746
November ..	1,876	1,734	3,484	1,592	1,349	1,966	1,732	2,008	1,722	1,806
December ..	1,876	1,734	3,650	1,595	1,312	1,985	1,759	2,010	1,749	1,826

(*a*) Figures are comparable in the vertical columns but not directly comparable horizontally.
(*b*) Represents only such imported commodities as are included in the wholesale price index. This index does not measure changes in price of imports generally.

D. WAGES.

§ 2. Rates of Wages and Hours of Labour.

NOTE.—The nominal wage and hours figures are in course of revision to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms.

Weekly Rates of Wage, pp. 466 and 468. The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index-numbers based thereon, for adult males and for adult females at 31st December, 1947 and 1948 :—

WAGE RATES OF ADULT MALES AND FEMALES.

(Weighted average nominal weekly rates payable for a full week's work and index-numbers of wage rates.)

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (*a*)
ADULT MALES—RATES OF WAGE.							
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
31st December, 1947	141 3	136 10	134 9	133 10	137 8	133 0	137 11
,, ,, 1948*b*	159 9	155 5	151 4	153 7	156 6	153 2	156 4
ADULT MALES—INDEX-NUMBERS.—(BASE 51S. 3D.(*a*) IN 1911 = 1,000.)							
31st December, 1947	2,757	2,670	2,630	2,612	2,686	2,595	2,690
,, ,, 1948*b*	3,117	3,032	2,953	2,997	3,054	2,988	3,050
ADULT FEMALES—RATES OF WAGE.							
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
31st December, 1947	84 3	88 6	85 11	80 11	80 1	81 11	85 8
,, ,, 1948*b*	100 0	103 1	98 4	95 1	93 5	96 8	100 4
ADULT FEMALES—INDEX-NUMBERS.—(BASE 27S. 2D.(*a*) IN APRIL, 1914 = 1,000.)							
31st December, 1947	3,102	3,256	3,160	2,976	2,947	3,014	3,152
,, ,, 1948*b*	3,681	3,795	3,618	3,499	3,438	3,559	3,694

(*a*) Weighted average for Australia. (*b*) Subject to revision.

§ 3. Basic Wages in Australia.

Current Commonwealth Basic Wage Rates, p. 480.—The basic weekly wage rates for adult males, fixed by the Commonwealth Court of Conciliation and Arbitration for each Capital City and the six capitals, operative at 1st June, 1949, were as follows :—Sydney, 127s. 0d. ; Melbourne, 125s. 0d. ; Brisbane, 119s. 0d. ; Adelaide, 121s. 0d. ; Perth, 120s. 0d. ; Hobart, 124s. 0d. ; Six Capitals, 124s. 0d. Female rates are generally 54 per cent. of male rates.

Current State Basic Wage Rates, p. 484.—The table below shows the current basic weekly wage rates declared by the various State tribunals, operative at 1st June, 1949:—

BASIC WEEKLY WAGE RATES FIXED BY STATE INDUSTRIAL TRIBUNALS.

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate).
	Males.	Females.		
	£ *s.* *d.*	£ *s.* *d.*		
New South Wales . .	(*a*) 6 7 0	(*a*) 3 8 6	1.5.49	(*b*)
Victoria(*c*) . .	(6 5 0)	(3 7 6)	(1.5.49)	(*c*)
Queensland . .	(*d*) 6 3 0	3 15 6	2.5.49	Man, wife and three children
South Australia . .	6 5 0	3 8 6	19.5.49	,, ,, ,, ,, ,,
Western Australia(*e*)	6 7 1	3 8 8	2.5.49	Man, wife and two children
Tasmania(*c*) . .	(6 4 0)	(3 7 0)	(1.5.49)	(*c*)

(*a*) Sydney, Newcastle, Port Kembla-Wollongong; Broken Hill—Males, £6 13s.; Females, £3 12s. Elsewhere—Males, £6 4s.; Females, £3 7s. (*b*) Commonwealth Basic Wage operative—no defined family unit. (*c*) None declared, but rates shown are those of Commonwealth Court which are followed to a large extent. No defined family unit. (*d*) South-Eastern Division. Allowances are added for other Divisions:—Northern, 10s.; North-Western, 17s. 4d.; Mackay, 5s. 6d.; South-Western, 7s. 4d. Half of these allowances are granted to females. (*e*) Metropolitan Area. Basic wage from 2.5.49 for Gold-fields Areas and other portions of State excluding the S.W. Land Division—Males, £6 15s. 1d.; Females £3 12s. 11d.; and for Agricultural Areas and S.W. Land Division—Males, £6 6s. 9d.; Females, £3 8s. 5d.

E. EMPLOYMENT.

§ 1. Employment.

Total Occupied Persons, p. 488.—Particulars of the total occupied persons in Australia in June, 1947 are shown below:—

TOTAL OCCUPIED PERSONS: AUSTRALIA, JUNE, 1947.(*a*)

(Thousands.)

Defence Forces (Net Enlistments).	Employers and Self Employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons including Forces.
	Rural Industry.	Other Industries.	Total.	Rural Industry.	Other Industries.	Total.		
MALES.								
54.5	293.0	278.8	571.8	150.0	1,649.4	1,799.4	2,371.2	2,425.7
FEMALES.								
1.0	14.4	54.4	68.8	11.0	(*b*) 670.6	681.6	750.4	751.4
PERSONS.								
55.5	307.4	333.2	640.6	161.0	2,320.0	2,481.0	3,121.6	3,177.1

(*a*) Preliminary estimates, subject to revision on completion of detailed tabulation of 1947 Census. (*b*) Includes 51,000 in private domestic service.

Wage and Salary Earners in Employment, p. 490.—The following table shows particulars of wage and salary earners in civil employment, excluding rural employment and females in domestic work in private homes, for the months of June and December, 1948 :—

WAGE AND SALARY EARNERS IN EMPLOYMENT.(*a*)
(Excluding Rural Workers, Domestic Workers in Private Homes, and Persons on paid Strength of Defence Forces.)
(Thousands.)

Year and Month.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(*b*)
MALES.							
1948—June ..	702.3	473.3	232.6	149.0	109.2	54.5	1,730.9
December ..	710.3	480.9	232.2	152.0	111.5	55.9	1,753.5
FEMALES.							
1948—June	261.9	196.7	77.9	50.1	37.0	18.0	644.0
December ..	271.1	202.0	79.7	51.7	38.0	18.1	663.2
PERSONS.							
1948—June ..	964.2	670.0	310.5	199.1	146.2	72.5	2,374.9
December ..	981.4	682.9	311.9	203.7	149.5	74.0	2,416.7

(*a*) Subject to revision. (*b*) Includes Australian Capital Territory and Northern Territory.

§ 2. Unemployment.

Total Persons Unemployed, p. 492.—Estimates, subject to revision, of the total numbers of unemployed in Australia in June, 1947, and their percentages to all wage and salary earners are as follows :—Males, 66,000 (3.5 per cent.) ; females, 16,700 (2.4 per cent.) ; persons, 82,700 (3.2 per cent.).

Unemployment of Members of Trade Unions, p. 495.—The following are the percentages of unemployment in each State for eight quarters March, 1947 to December 1948 and the years 1947 and 1948 :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS : PERCENTAGES.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	%	%	%	%	%	%	%
1947—March Qtr.	1.5	1.6	0.8	1.1	1.4	2.2	1.4
June ,, ..	1.4	1.1	0.9	1.0	1.1	2.4	1.2
Sept. ,, ..	1.1	1.2	0.8	1.0	1.1	2.5	1.1
Dec. ,, ..	1.0	0.8	0.4	0.8	1.1	2.3	0.9
Year ..	1.3	1.2	0.7	1.0	1.2	2.3	1.2
1948—March ,, ..	1.0	0.8	0.5	0.9	1.0	0.5	0.9
June ,, ..	1.0	0.8	0.5	1.0	1.0	0.5	0.9
Sept. ,, ..	0.9	1.0	0.4	1.2	0.8	0.7	0.9
Dec. ,, ..	0.9	0.7	0.3	1.1	0.7	1.0	0.8
Year ..	1.0	0.8	0.4	1.1	0.9	0.7	0.9

§ 4. Industrial Disputes.

Summary of Disputes (involving Stoppage of Work), p. 501. The following table shows particulars of industrial disputes in each State during the years 1947 and 1948 :—

INDUSTRIAL DISPUTES.

State.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages. £
			Directly.	Indirectly.	Total.		
				1947.			
New South Wales ..	921	2,731	254,587	43,211	297,798	919,411	1,360,632
Victoria	17	233	6,005	1,929	7,934	334,185	417,426
Queensland ..	13	24	11,944	20	11,964	31,245	45,953
South Australia ..	17	35	4,821	832	5,653	39,654	53,916
Western Australia ..	7	12	1,759	7	1,766	6,070	8,622
Tasmania ..	6	17	1,152	220	1,372	5,563	7,636
Australia(*a*) ..	982	3,058	280,718	46,419	327,137	1,338,728	1,898,085
				1948.			
New South Wales ..	1,071	1,832	235,473	7,036	242,509	644,961	1,155,940
Victoria	21	82	41,734	155	41,889	159,903	240,634
Queensland ..	12	27	13,734	7,797	21,531	815,107	833,269
South Australia ..	21	28	5,891	1,136	7,027	30,264	47,138
Western Australia ..	1	1	244	..	244	488	600
Tasmania ..	4	5	468	..	468	950	1,473
Australia(*b*)	1,133	2,057	298,913	16,124	315,037	1,655,338	2,284,418

(*a*) Includes one dispute in Australian Capital Territory. (*b*) Includes three disputes in Northern Territory.

CHAPTER XIV.—PRIVATE FINANCE.

A. CURRENCY.

§ 2. Coinage.

Issues of Australian Coins, p. 558.—Australian Coins issued during 1947–48 and total issues to 30th June, 1948 are shown in the following statement.

AUSTRALIAN COINS : SILVER AND BRONZE ISSUES, 1947–48.

Year.	Silver.						Bronze.		
	Crown. 5s.	Florin. 2s.	Shilling. 1s.	Sixpence. 6d.	Threepence. 3d.	Total.	Penny. 1d.	Halfpenny. ½d.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1947–48	..	5,120	557	251	216	6,144	73	31	104
Total to 30th June, 1948	276	21,454	5,227	2,804	2,840	32,601	1,147	390	1,537
Less coin withdrawn ..	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	3,375	..	..	..
Net issues to 30th June, 1948	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	29,226	1,147	390	1,537

(*a*) Not available.

§ 3. Notes.

Australian Note Issue, p. 563.—Particulars of the average values of notes in circulation for the year 1947–48 are shown in the following table.

AUSTRALIAN NOTE ISSUE, 1947–48.

10s.	£1.	£5.	£10.	£20.	£50.	£100.	£1,000.	Held by Banks.	Held by Public.	Total.
£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
8,268	65,356	77,663	46,216	8	85	163	547	22,296	176,010	198,306

B. BANKING.

§ 1. Cheque-Paying Banks.

Commonwealth Bank, pp. 574–5.—The following tables show particulars of the more important average liabilities and assets of the Commonwealth Bank for the quarter ended December, 1948.

COMMONWEALTH BANK: CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT), DECEMBER QUARTER, 1948.

Average Liabilities.						Average Assets.	
Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Liabilities.	Total Liabilities.	Gold and Balances held abroad.	Government and other Securities. (*a*)
£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
9,692	202,182	289,607	32,129	184,971	718,581	324,631	359,490

(*a*) Includes Commonwealth Treasury Bills.

COMMONWEALTH BANK: GENERAL BANKING DIVISION,(*a*) DECEMBER QUARTER, 1948.

Average Liabilities within Australia.				Average Assets within Australia.			
Deposits.							
Not Bearing Interest.	Bearing Interest.	Total.	Total Liabilities.	Cash and Cash Balances.	Australian Public Securities.	Loans, Advances and Bills Discounted.	Total Assets.
£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
51,200	13,741	64,941	74,428	7,955	(*b*) 32,737	46,074	89,001

(*a*) From October, 1948 includes the Rural Credits, Industrial Finance and Mortgage Bank Departments. (*b*) Includes £750,000 Commonwealth Treasury Bills.

Nine Trading Banks, pp. 575–6.—The table below is a summary of the main average liabilities and assets within Australia of the Nine Trading Banks for the year ended 30th June, 1948, and the December quarter of 1948.

NINE TRADING BANKS.(*a*)

	Average Liabilities within Australia.			Average Assets within Australia.				
Period.	Deposits.							
	Not Bearing Interest.	Bearing Interest.	Total.	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Australian Public Securities.(*b*)	Loans, Advances and Bills Discounted.	Total Assets.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Year 1947–48	471,604	201,892	673,496	44,390	262,258	83,695	329,850	751,475
Qtr. Dec., 1948	554,106	212,699	766,805	50,778	288,457	88,694	372,505	836,230

(*a*) Excludes interbank balances resulting from the transfer of the business of the Queensland National Bank Ltd. (in voluntary liquidation) to the National Bank of Australasia Ltd., which commenced in January, 1948. (*b*) Includes Commonwealth Treasury Bills—1947–48, £18,089,000; December quarter, £28,585,000.

Clearing House Returns, p. 580.—The average weekly bank clearings for each capital city for the year ended June, 1948, and the quarters ended March, 1948 to December 1948, are shown in the following table :—

BANK CLEARINGS(*a*) : AVERAGE WEEKLY CLEARINGS.

Period.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Year ended June, 1948 ..	44,786	41,237	9,288	8,038	4,892	1,543	109,784
Quarter ended—							
March, 1948	42,284	38,648	8,299	8,163	5,252	1,550	104,196
June, 1948	51,467	46,713	10,161	9,182	5,264	1,682	124,469
September, 1948 ..	49,955	46,425	10,993	8,569	5,184	1,671	122,797
December, 1948 ..	54,886	48,942	10,883	9,877	6,354	1,692	132,634

(*a*) Excludes transactions connected with the issue and redemption of Treasury Bills.

Debits to Customers' Accounts, p. 581.—In the following table are shown the average weekly debits to customers' accounts of all cheque-paying banks for each State for the quarters March, 1948 to December, 1948 :—

AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS(*a*) : ALL CHEQUE-PAYING BANKS.

Quarter ended—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
March, 1948 ..	74,754	59,240	18,481	12,302	8,961	3,771	131	177,640
June, 1948 ..	86,244	72,684	21,978	14,591	9,620	4,450	167	209,734
September, 1948	83,631	71,531	23,215	13,710	9,493	4,271	175	206,026
December, 1948	92,467	76,703	24,220	15,516	11,071	4,578	176	224,731

(*a*) Excludes debits relating to transfer of accounts from the Queensland National Bank Ltd. (in voluntary liquidation) to the National Bank of Australasia Ltd.

§ 2. Savings Banks.

All Savings Banks, p. 585.—The amounts on deposit in the several States at 30th June, 1948 were :—New South Wales, £236,964,000 ; Victoria, £226,401,000 ; Queensland, £84,836,000 ; South Australia, £73,613,000 ; Western Australia, £36,183,000 ; Tasmania, £21,572,000 ; Northern Territory, £649,000 ; Australian Capital Territory, £1,100,000 ; total, £681,318,000. Total excess of deposits over withdrawals during 1947–48 was £10,009,000, and interest added was £11,294,000.

D INSURANCE.

§ 2. Life Assurance.

Life Assurance, pp. 597 and 601.—The following table is a summary of the life assurance business transacted in Australia, compiled from the annual returns collected from the 21 companies registered under the Life Insurance Act 1945, and from the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office.

LIFE ASSURANCE(*a*), 1947.

Particulars.	Ordinary Department.			Industrial Department.		
	Number of Policies.	Sum Assured.	Annual Premiums.	Number of Policies.	Sum Assured.	Annual Premiums.
	No.	£'000.	£'000.	No.	£'000.	£'000.
New Policies Issued ..	250,022	119,169	4,356	315,948	27,228	1,293
Policies Discontinued	85,478	33,070	1,294	204,626	12,406	720
Policies Existing ..	1,901,639	740,496	25,463	3,540,816	193,107	10,859

(*a*) Excludes annuities.

§ 3. Fire, Marine and General Insurance.

Fire, Marine and General Insurance, p. 604.—The following table shows premiums and losses in relation to the principal classes of risks and proportions of losses on premiums for the year 1947–48.

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES, PRINCIPAL CLASSES OF RISK, 1947–48.

Class of Risk.	Premiums, less Re-Insurances and Returns.	Losses, less Re-Insurances.	Proportion of Losses on Premiums.
	£	£	%
Fire	9,073,788	2,414,294	26.61
Workers' Compensation	8,628,257	6,286,724	72.86
Motor Vehicle—			
Compulsory Third Party	1,435,733	1,493,117	104.00
Other	4,233,635	2,619,501	61.87
Marine	3,026,205	1,144,910	37.83
All Other	5,440,130	2,930,697	53.87
Total	31,837,748	16,889,243	53.05

CHAPTER XV.—PUBLIC FINANCE.

A. COMMONWEALTH FINANCE.

§ 4. Commonwealth Loan Funds and Public Debt.

Loans Raised, pp. 642–4.—Particulars of loans raised by the Commonwealth between 1st June, 1947 and 31st December, 1948 are given in the following table.

COMMONWEALTH LOANS RAISED.

Month of Raising.	Where Raised.	Amount Invited.	Amount Subscribed.	Rate of Interest.	Year of Maturity.	Price of Issue.	Purpose.
		£'000.(*a*)	£'000.(*a*)	%		£	
1946–47—							
June ..	New York	(*b*) 3,904	(*b*) 3,904	3¼	1957	97½	Redemption of New York loan
June ..	New York	(*b*) 3,904	(*b*) 3,904	3½	1967	97½	
1947–48—							
August ..	Australia	36,752	28,111	3⅛	1956–59	100	Conversion loan
October ..	Australia	80,000	19,015	3⅛	1956–59	100	Conversion Loan
			21,616				War (1939–45) Services and Post-war Charges
			13,012				Housing
			26,600				States
December ..	Australia	6,000	6,000	3⅛	1956–59	100	Redemption Loan
January	London	12,870	12,870	3	1963–65	98½	Conversion and redemption of London loan
	Australia	3,761	3,761	3⅛	1960	100	
April ..	Australia	35,000	6,625	3⅛	1957–60	100	War (1939–45) Services and Post-war Charges
			7,645				Housing
			29,028				States
May ..	London	10,000	10,000	3	1964–66	100	Conversion and redemption of London loan
1948–49—							
September	Australia	5,000	5,000	3⅛	1957–60	100	Conversion and redemption of London loans
	London	15,000	15,000	3	1965–67	100	
September ..	Australia	100,000	85,096	3⅛	1959–62	100	Conversion and redemption loan
			15,000				States
January ..	Australia	6,200	6,200	3⅛	1962	100	Redemption of London loan

(*a*) Loans raised in Australia, £A. Loans raised in London, £stg. Loans raised in New York converted at rate of $4.8665 to £1. (*b*) $19,000,000 each.

C. COMMONWEALTH AND STATE FINANCE.

Revenue and Expenditure, p. 680.—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1947–48.

COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE, 1947–48.

Government of—	Consolidated Revenue Fund.			Loan Fund—Net Expenditure on Works and Services.
	Revenue.	Expenditure.	Surplus (+) or Deficit (−)	
	£'000.	£'000.	£'000.	£'000.
New South Wales	86,816	86,938	−122	15,129
Victoria	41,728	42,282	−554	8,786
Queensland	26,820	26,914	−94	4,718
South Australia	18,843	19,156	−313	3,805
Western Australia	17,710	18,062	−352	2,537
Tasmania	4,816	5,102	−286	2,634
Six States	196,733	198,454	−1,721	37,609
Commonwealth	465,905	464,485	+1,420	13,126
Grand Total—Unadjusted ..	662,638	662,939	−301	50,735
Adjusted ..	602,400	602,700	−300	50,735

Taxation, p. 681.—Particulars of total Commonwealth and State taxation collections in 1947–48 are shown in the following table:—

COMMONWEALTH AND STATE TAXATION: TOTAL COLLECTIONS, 1947–48.

Tax.	Commonwealth.		States.		Total.	
	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.
	£'000.	£ s. d.	£'000.	£ s. d.	£'000.	£ s. d.
Customs Duties ..	57,597	7 10 9	..	..	57,597	7 10 9
Excise Duties ..	58,008	7 11 10	..	..	58,008	7 11 10
Sales Tax	34,728	4 10 11	..	..	34,728	4 10 11
Land Taxes ..	3,641	0 9 6	1,236	0 3 3	4,877	0 12 9
Income Taxes ..	232,900	30 9 8	416	0 1 1	233,316	30 10 9
Pay-roll Tax ..	16,595	2 3 6	..	..	16,595	2 3 6
Probate and Succession Duties	4,555	0 11 11	8,836	1 3 2	13,391	1 15 1
Entertainment Taxes	5,198	0 13 7	3,081	0 8 1	8,279	1 1 8
Liquor Taxes ..	..	..	2,032	0 5 4	2,032	0 5 4
Lotteries Taxes ..	..	..	1,011	0 2 8	1,011	0 2 8
Motor Taxes ..	..	..	8,899	1 3 5	8,899	1 3 3
Other Taxes ..	9,191	1 4 1	6,621	0 17 5	15,812	2 1 5
Total ..	422,413	55 5 9	32,132	4 4 5	454,545	59 9 11

Public Debt, p. 682.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 30th June, 1948.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE AT 30th JUNE, 1948.

State.	Maturing in— Australia.	London. (a)	New York. (b)	Total.
PUBLIC DEBT.				
	£'000.	£'000.	£'000.	£'000.
New South Wales	233,097	139,672	11,309	384,078
Victoria	128,243	56,132	4,571	188,946
Queensland	86,503	47,273	4,918	138,694
South Australia	79,261	37,815	1,776	118,852
Western Australia	59,251	38,986	2,038	100,275
Tasmania	25,408	8,312	237	33,957
Six States	611,763	328,190	24,849	964,802
Commonwealth—				
War (1914–18)	154,046	10,645	..	164,691
War (1939–45)	1,508,195	5,775	..	1,513,970
Works and other Purposes ..	77,906	52,991	15,855	146,752
Total	1,740,147	69,411	15,855	1,825,413
Grand Total	2,351,910	397,601	40,704	2,790,215
ANNUAL INTEREST PAYABLE.				
	£'000.	£'000.	£'000.	£'000.
Six States	19,686	10,737	918	31,341
Commonwealth	47,892	2,396	696	50,984
Grand total	67,578	13,133	1,614	82,325

(a) Expressed in £ sterling. (b) £ converted at rate $4.8665 to £1.

D. TAXES ON INCOME.

Effective Exemptions from Tax, p. 693.—For the income years 1948–49 and 1949–50 taxpayers are exempt from Social Services Contribution and/or Income Tax if their income does not exceed the amounts shown in the following table.

Taxpayer with—	Social Services Contribution. 1948–49 Income.	Social Services Contribution. 1949–50 Income.	Income Tax (Personal Exertion). 1948–49 Income.	Income Tax (Personal Exertion). 1949–50 Income.
	£	£	£	£
No dependants	104	104	350	500
Wife	200	200	501	660
Wife and one child	283	283	613	771
Wife and two children	317	317	669	827
Wife and three children	350	350	726	883
Wife and four children	400	400	783	939

Rates of Tax on Individuals, p. 693.—The following table shows the rates of income tax in respect of 1948–49 and 1949–50 incomes.

(*T = Taxable Income in Pounds.*)

Rates.	Personal Exertion.		Property.	
	Taxable Income.	Tax in Pence.	Taxable Income.	Tax in Pence.
1948–49 Income—	£351–£1,000	$.03T^2 - 3075$	£351– £500	$.06T^2 - 12T - 3150$
	£1,001–£2,000	$.02T^2 + 20T - 13{,}675$	£501–£1,000	$.03T^2 + 18T - 10{,}650$
	£2,001–£5,000	$.009T^2 + 64T - 57{,}675$	£1,001–£2,000	$.021T^2 + 36T - 19{,}650$
	£5,001–£9,000	$.001T^2 + 144T - 257{,}675$	£2,001–£5,000	$.007T^2 + 92T - 75{,}650$
	over £9,000	$162T - 338{,}675$	over £5,000	$162T - 250{,}650$
1949–50 Income—	£501–£1,000	$.024T^2 - 6T - 3{,}000$	£351– £500	$.005T^2 + 4.25T - 2{,}100$
	£1,001–£2,000	$.02T^2 + 2T - 7{,}000$	£501–£1,000	$.03T^2 - 2T - 5{,}225$
	£2,001–£5,000	$.01T^2 + 42T - 47{,}000$	£1,001–£2,000	$.022T^2 + 14T - 13{,}225$
	£5,001–£10,000	$.002T^2 + 102T - 247{,}000$	£2,001–£5,000	$.008T^2 + 70T - 69{,}225$
	over £10,000	$162T - 447{,}000$	£5,001–£10,000	$.0012T^2 + 138T - 239{,}225$
			over £10,000	$162T - 359{,}225$

For the income year 1948–49 the basic rate of Social Services Contribution for every £1 of income was 3 pence increasing uniformly by .06 pence for every £1 by which the income exceeded £100. The maximum basic rate was 1s. 6d. in the £1 which was reached at £350 and applied to all incomes over that amount. The concessional rate was the basic rate multiplied by the ratio of the excess of the contributable income over the sum of the concessional allowances to the lesser of the contributable income or £350.

For the income year 1949–50 the basic rate of Social Services Contribution for every £1 of income is 3 pence increasing uniformly by .0375 pence for every £1 by which the income exceeds £100. The maximum basic rate remains at 1s. 6d. in the £1, is reached at £500 and applies to all incomes over that amount. The concessional rate is—

> If the contributable income does not exceed the sum of the concessional allowances by more than £100—.03d. multiplied by the excess of the contributable income over the sum of the concessional allowances.
>
> If the contributable income exceeds the sum of the concessional allowances by more than £100 but by less than £500—the rate which would be the basic rate if the contributable income of the contributor were equal to the excess of the contributable income over the sum of the concessional allowances.
>
> In all other cases—1s. 6d.

Taxes on Sample Individual Incomes, p. 694.—The following tables show the Income Tax and Social Services Contribution payable by taxpayers with varying incomes and numbers of dependants on income derived in 1948–49 and in 1949–50 :—

COMMONWEALTH TAXES ON INCOME.

Income.	1948–49 Income Year.			1949–50 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total.
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.						
£	£	£	£	£	£	£
150 ..	..	3.75	3.75	..	3.05	3.05
200 ..	..	7.50	7.50	..	5.60	5.60
250 ..	..	12.50	12.50	..	9.00	9.00
300 ..	..	18.75	18.75	..	13.10	13.10
350 ..	..	26.25	26.25	..	18.05	18.05
400 ..	4.70	30.00	34.70	..	23.75	23.75
500 ..	15.95	37.50	53.45	..	37.50	37.50
600 ..	29.70	45.00	74.70	8.50	45.00	53.50
800 ..	64.70	60.00	124.70	31.50	60.00	91.50
1,000 ..	109.70	75.00	184.70	62.50	75.00	137.50
1,500 ..	255.55	112.50	368.05	170.85	112.50	283.35
2,000 ..	443.00	150.00	593.00	320.85	150.00	470.85
3,000 ..	897.15	225.00	1,122.15	704.15	225.00	929.15
5,000 ..	2,030.50	375.00	2,405.50	1,720.85	375.00	2,095.85
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.						
£	£	£	£	£	£	£
250 ..	..	2.50	2.50	..	1.55	1.55
300 ..	..	7.80	7.80	..	4.90	4.90
350 ..	..	15.00	15.00	..	9.85	9.85
400 ..	..	21.45	21.45	..	14.35	14.35
500 ..	..	37.50	37.50	..	25.80	25.80
600 ..	11.05	45.00	56.05	..	40.30	40.30
800 ..	41.30	60.00	101.30	14.35	60.00	74.35
1,000 ..	82.00	75.00	157.00	41.90	75.00	116.90
1,500 ..	218.75	112.50	331.25	142.50	112.50	255.00
2,000 ..	398.50	150.00	548.50	285.55	150.00	435.55
3,000 ..	852.15	225.00	1,077.15	659.15	225.00	884.15
5,000 ..	1,985.50	375.00	2,360.50	1,675.85	375.00	2,050.85

COMMONWEALTH TAXES ON INCOME—*continued.*

Income.	1948–49 Income Year.			1949–50 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total.

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD.

£	£	£	£	£	£	£
300	..	1.55	1.55	..	0.95	0.95
350	..	7.50	7.50	..	4.35	4.35
400	..	12.85	12.85	..	8.10	8.10
500	..	26.80	26.80	..	17.95	17.95
600	..	45.00	45.00	..	30.95	30.95
800	25.75	60.00	85.75	2.90	60.00	62.90
1,000	63.55	75.00	138.55	28.15	75.00	103.15
1,500	194.20	112.50	306.70	123.65	112.50	236.15
2,000	368.85	150.00	518.85	262.00	150.00	412.00
3,000	814.75	225.00	1,039.75	628.20	225.00	853.20
5,000	1,940.50	375.00	2,315.50	1,633.95	375.00	2,008.95

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN.

£	£	£	£	£	£	£
350	..	3.75	3.75	..	2.20	2.20
400	..	8.55	8.55	..	5.00	5.00
500	..	21.45	21.45	..	14.05	14.05
600	..	38.55	38.55	..	26.25	26.25
800	17.95	60.00	77.95	..	60.00	60.00
1,000	54.30	75.00	129.30	21.25	75.00	96.25
1,500	181.95	112.50	294.45	114.20	112.50	226.70
2,000	354.05	150.00	504.05	250.25	150.00	400.25
3,000	799.75	225.00	1,024.75	613.20	225.00	838.20
5,000	1,925.50	375.00	2,300.50	1,618.95	375.00	1,993.95

INCOME FROM PROPERTY.—TAXPAYER WITH NO DEPENDANTS.

£	£	£	£	£	£	£
150	..	3.75	3.75	..	3.05	3.05
200	..	7.50	7.50	..	5.60	5.60
250	..	12.50	12.50	..	9.00	9.00
300	..	18.75	18.75	..	13.10	13.10
350	..	26.25	26.25	..	18.05	18.05
400	6.85	30.00	36.85	1.65	23.75	25.40
500	24.35	37.50	61.85	5.30	37.50	42.80
600	45.60	45.00	90.60	18.25	45.00	63.25
800	95.60	60.00	155.60	51.55	60.00	111.55
1,000	155.60	75.00	230.60	94.90	75.00	169.90
1,500	340.00	112.50	452.50	238.65	112.50	351.15
2,000	568.10	150.00	718.10	428.25	150.00	578.25
3,000	1,097.30	225.00	1,322.30	886.55	225.00	1,111.55
5,000	2,330.60	375.00	2,705.60	2,003.25	375.00	2,378.25

CHAPTER XVI.—POPULATION.

§ 2. The Census.

Results of the Censuses, p. 701.—The following table shows the population of each State and Territory as recorded at the final count of the Census of 30th June, 1947 :—

POPULATION OF STATES : 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	30th June, 1947. (Final Count) Males.	Females.	Persons.
New South Wales	1,492,211	1,492,627	2,984,838
Victoria	1,013,867	1,040,834	2,054,701
Queensland	567,471	538,944	1,106,415
South Australia	320,031	326,042	646,073
Western Australia	258,076	244,404	502,480
Tasmania	129,244	127,834	257,078
Northern Territory	7,378	3,490	10,868
Australian Capital Territory	9,092	7,813	16,905
Australia	3,797,370	3,781,988	7,579,358

§ 3. Distribution and Fluctuation of Population.

Growth and Distribution, pp. 703–4, Mean Population, pp. 705–6.—The following table shows the latest population figures for each State and Territory :—

ESTIMATED POPULATION.(*a*)

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Population—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
At 31st Dec., 1947—									
Males ..	1,504,350	1,016,950	569,480	324,055	261,689	135,674	7,403	9,270	3,828,871
Females ..	1,503,232	1,044,739	541,341	329,010	247,192	132,841	3,588	7,814	3,809,757
Persons ..	3,007,582	2,061,689	1,110,821	653,065	508,881	268,515	10,991	17,084	7,638,628
PERSONS.									
Mean for year ended—									
Dec., 1947(*b*)	2,985,073	2,053,648	1,105,360	646,294	502,978	257,781	10,891	16,903	7,578,928
June, 1948	3,006,481	2,069,167	1,112,722	652,285	508,860	261,781	11,310	17,596	7,640,202

(*a*) Excludes Australian defence personnel overseas as from Census, 30th June, 1947. (*b*) Based on populations revised in accordance with the final results of the 1947 Census.

§ 4. Elements of Increase.

Natural Increase and Total Increase, pp. 718–9 and 724.—The following table shows particulars of natural increase and of total increase during the year 1947 :—

POPULATION : NATURAL INCREASE AND TOTAL INCREASE, 1947.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
NATURAL INCREASE.(*a*)									
Persons ..	40,949	25,924	18,242	10,102	8,151	4,777	211	560	108,916
Rate(*b*) ..	13.72	12.62	16.50	15.63	16.21	18.53	19.37	33.13	14.37
TOTAL INCREASE.(*c*)									
Persons ..	44,650	21,408	14,138	12,513	11,704	13,916	355	698	119,382

(*a*) Excess of births over deaths, exclusive of all deaths of defence personnel prior to July, 1947, but inclusive of deaths of defence personnel in Australia from July, 1947 onwards. (*b*) Excess of births over deaths, as defined in note (*a*), per 1,000 of mean population revised in accordance with the final results of the 1947 Census. (*c*) Includes deaths of defence personnel, both in Australia and overseas, prior to July, 1947. Subsequently only deaths of defence personnel in Australia have been included. Interstate migration has not been taken into account until July, 1947.

§ 6. General Characteristics.

1. **General, p. 729.**—The information in the following paragraphs provides comparisons of the results of the Census of 30th June, 1947 with those of the Census of 30th June, 1933, or of earlier Censuses.

2. **Age Distribution.**—The age distribution of the population is obtained only at a Census. The following table shows the variation which took place in the age constitution of the population during the 14 years following the 1933 Census. Reference to the graph on page 713 will show regular wave-like movements in the curves depicting age constitution at various Censuses prior to 1947, owing to fluctuations in the birth-rate and in migration. The curve of age constitution for the 1921 Census showed definite troughs in the age-group 0 to 4 years owing to the decline in the birth-rate during the war years, and in the age-group 20 to 24 years owing to the decline in the birth-rate in the late 'nineties of last century and to the loss of young males during the 1914–18 War. At the 1933 Census these same troughs were still prominent, but owing to the lapse of time they then showed at the later ages of 12 to 16 years and 32 to 36 years. But for all ages below about 10 years the curve had been depressed to an extent which was even more marked than in 1921. This was due to a serious decline in the birth-rate, which was intensified in the years immediately prior to 1933 by the economic depression. The ages recorded at a Census are not free from error and are therefore subjected to a process of graduation, or smoothing, to eliminate the effects of the tendency to mis-statement at certain ages. These graduated results have been used in the graph on page 713, but not in the table hereunder, as graduated figures for the 1947 Census are not yet available. The figures shown in this table represent the numbers recorded in each age-group after distribution of unspecified ages over the population aged 15 years and upwards.

Of the 7,579,358 persons enumerated at the 1947 Census, 10.0 per cent. were under 5 years of age; 8.0 per cent. were 5 years of age and under 10 years; 7.1 per cent. from 10 to 14 years; 7.7 per cent. 15 to 19 years; and 34.4 per cent. were under age 21. At the 1933 Census 8.6 per cent. were under 5 years; 9.5 per cent. 5 to 9 years; 9.4 per cent. 10 to 14 years; 9.3 per cent. 15 to 19 years; and 38.6 per cent. under 21 years of age.

Owing mainly to the fall in the birth-rate, the numbers of young people in Australia between the ages of 5 to 19 years in 1947 shows a serious decline of 142,680 compared with the numbers in this age-group in 1933. The corresponding increase in this age-group from 1921 to 1933 was 277,154 persons. Although the decrease in the 5 to 19 years age-group in 1947 is offset by an increase of 191,422 persons in the age-group 0 to 4 years, the proportion of persons under 21 years of age in Australia has decreased from 38.6 per cent. in 1933 to 34.4 per cent. in 1947 whilst the proportion of persons aged 21 years and over has increased from 61.4 per cent. to 65.6 per cent. over the same period.

POPULATION : ADJUSTED AGE DISTRIBUTION(*a*) AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age last Birthday. (Years).	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
0– 4..	290,461	278,504	568,965	388,301	372,086	760,387	191,422
5– 9..	318,937	308,443	627,380	307,697	296,286	603,983	– 23,397
10–14..	317,526	307,696	625,222	271,761	262,922	534,683	– 90,539
15–19..	311,792	303,618	615,410	297,524	289,142	586,666	– 28,744
20–24..	298,001	286,617	584,618	309,490	308,464	617,954	33,336
25–29..	277,462	256,508	533,970	297,497	300,889	598,386	64,416
30–34..	251,515	237,664	489,179	297,531	300,567	598,098	108,919
35–39..	228,660	237,493	466,153	285,309	275,637	560,946	94,793
40–44..	229,822	226,469	456,291	258,008	238,284	496,292	40,001
45–49..	209,325	199.388	408,713	236,381	229,347	465,728	57,015
50–54..	171,688	162,774	334,462	207,515	217,473	424,988	90,526
55–59..	132,314	128,857	261,171	198,928	198,521	397,449	136,278
60–64..	114,859	113,746	228,605	159,157	164,552	323,709	95,104
65–69..	92,946	90,499	183,445	116,511	126,863	243,374	59,929
70–74..	66,018	64,282	130,300	76,919	90,481	167,400	37,100
75–79..	35,920	36,255	72,175	50,914	61,079	111,993	39,818
80–84..	13,862	15,736	29,598	26,218	32,696	58,914	29,316
85–89..	4,640	6,234	10,874	9,627	13,301	22,928	12,054
90–94..	1,148	1,607	2,755	1,815	2,938	4,753	1,998
95–99..	184	306	490	252	439	691	201
100 and over	31	32	63	15	21	36	–27
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519
Under 21 years.. ...	1,300,183	1,257,814	2,557,997	1,324,605	1,280,353	2,604,958	46,961
21 years and over ..	2,066,928	2,004,914	4,071,842	2,472,765	2,501,635	4,974,400	902,558
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(*a*) Unspecified ages have been distributed over the population aged 15 years and upwards.

NOTE.—Minus sign (–) denotes decrease.

The next table shows the change which has been taking place in the age constitution of the population of Australia since 1871. Each successive Census except 1921 has revealed a larger percentage of the population 15 years of age and over than was recorded at the previous Census.

POPULATION : AGE DISTRIBUTION, AUSTRALIA, 1871 TO 1947.

Census Year.	Males.				Females.				Persons.			
	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.
	%	%	%	%	%	%	%	%	%	%	%	%
1871	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891	34.80	62.01	3.19	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947	25.48	67.08	7.44	100	24.63	66.71	8.66	100	25.05	66.90	8.05	100

3. **Conjugal Condition.**—Of the total population of Australia at the 1947 Census, 47.3 per cent. had never married ; 46.4 per cent. were married ; 5.6 per cent. widowed ; and 0.7 per cent. divorced. Since the 1933 Census the number never married had decreased by 2.4 per cent. ; those married increased by 35.2 per cent. ; the widowed by 28.4 per cent. ; and the divorced by 148 per cent.

From a demographic point of view the most important change in the conjugal condition of the population of Australia since 1933 was the decrease in the number of persons who had never married and the relative increase in the number of married persons. In 1947, 62.0 per cent. of all persons 15 years of age and over, who stated their conjugal condition, were married, compared with 54.2 per cent. in 1933. If the latter percentage had obtained in 1947 there would have been approximately 440,000 fewer married persons at 30th June, 1947.

The number of widowed females recorded in Australia in 1947 was 309,383, or nearly three times as many as the number of widowed males. This disparity is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage ; and the second is that a larger proportion of males cancel their widowhood by remarriage.

The number of divorced persons increased by 31,280 between 1933 and 1947 compared with an increase of 12,585 between 1921 and 1933. The numbers of divorced males and females at 30th June, 1933 in this table differ slightly from those shown on page 279 where the conjugal conditions of those for whom particulars were not given at the Census have been distributed proportionately among the various groups.

POPULATION : CONJUGAL CONDITION, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Never Married—							
Under age 15 ..	926,924	894,643	1,821,567	967,759	931,294	1,899,053	77,486
Age 15 and over ..	1,018,587	825,448	1,844,035	929,212	748,414	1,677,626	−166,409
Total	1,945,511	1,720,091	3,665,602	1,896,971	1,679,708	3,576,679	− 88,923
Married(*a*)	1,299,693	1,293,922	2,593,615	1,751,635	1,754,775	3,506,410	912,795
Widowed	97,775	230,180	327,955	111,680	309,383	421,063	93,108
Divorced	10,251	10,862	21,113	24,952	27,441	52,393	31,280
Not Stated	13,881	7,673	21,554	12,132	10,681	22,813	1,259
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(*a*) Includes persons permanently separated (legally or otherwise).
NOTE.—Minus sign (−) denotes decrease.

4. **Dependent Children under 16 years of age.**—At the 1947 Census 927,453 males and 66,418 females stated they had children under 16 years of age dependent on them at 30th June, 1947, the total number of dependent children under age 16 claimed being 1,962,791, of whom 1,853,314 or 94.4 per cent. were dependent on males and 109,477 or 5.6 per cent. were dependent on females. This represented an average of 2.00 for each male with dependent children and 1.65 for each female with dependent children.

Forty-three per cent. of the males with dependent children under 16 years of age had one dependent child; 32 per cent. two children; 15 per cent. three children; 6 per cent. four children; 2 per cent. five children; and 2 per cent. more than five children. Of the females with dependent children under 16 years of age, 60 per cent. had one dependent child; 25 per cent. two children; 9 per cent. three children; 4 per cent. four children; 1 per cent. five children; and 1 per cent. more than five children.

Compared with 1933, the number of children dependent on persons with one, two or three dependent children increased by 234,521, but this increase was largely offset by decreases in the number of children dependent on persons with four or more dependent children. Although persons with dependent children increased by 127,759, the number of children under 16 years dependent on such persons increased by only 42,932.

POPULATION : PERSONS WITH DEPENDENT CHILDREN UNDER SIXTEEN YEARS OF AGE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Number of Dependent Children.	Census, 30th June, 1933.				Census, 30th June, 1947.				Increase 1933–47.	
	Number of Persons with Dependent Children.			Total Number of Dependent Children.	Number of Persons with Dependent Children.			Total Number of Dependent Children.	Persons.	Dependent Children.
	Males.	Females.	Persons.		Males.	Females.	Persons.			
1 ..	306,695	34,823	341,518	341,518	401,464	39,683	441,147	441,147	99,629	99,629
2 ..	233,167	14,631	247,798	495,596	291,739	16,482	308,221	616,442	60,423	120,846
3 ..	131,646	6,724	138,370	415,110	136,819	6,233	143,052	429,156	4,682	14,046
4 ..	69,485	3,067	72,552	290,208	57,036	2,578	59,614	238,456	− 12,938	− 51,752
5 ..	34,676	1,337	36,013	180,065	23,223	1,036	24,259	121,295	− 11,754	− 58,770
6 ..	17,270	557	17,827	106,962	10,395	263	10,658	63,948	− 7,169	− 43,014
7 ..	7,497	185	7,682	53,774	4,114	96	4,210	29,470	− 3,472	− 24,304
8 ..	2,931	75	3,006	24,048	1,753	35	1,788	14,304	− 1,218	− 9,744
9 ..	964	15	979	8,811	697	11	708	6,372	− 271	− 2,439
10 ..	281	3	284	2,840	167	1	168	1,680	− 116	− 1,160
11 ..	69	..	69	759	37	..	37	407	− 32	− 352
12 ..	14	..	14	168	4	..	4	48	− 10	− 120
13 ..	..	..	..	..	4	..	4	52	4	52
14 ..	..	..	..	..	1	..	1	14	1	14
Total ..	804,695	61,417	866,112	1,919,859	927,453	66,418	993,871	1,962,791	127,759	42,932

NOTE.—Minus sign (−) denotes decrease.

5. **Religion.**—At the 1921 Census 92,258 persons in Australia, or 1.7 per cent., gave no reply to this question, but in 1933 and again at the 1947 Census, when the public was informed there was no legal obligation to answer this question, 848,948 persons, or 12.8 per cent., and 824,824 or 10.9 per cent., respectively, gave no reply. Of males 11.7 per cent. and of females 10.0 per cent. did not state their religion in 1947.

Of those who stated their religion, the greatest numerical increase during the intercensal period between 1933 and 1947 was recorded by the Church of England, followed by the Roman Catholic and Catholic (so described), which it is thought may be grouped without serious error, as the latter term usually signifies Roman Catholic. Then followed Methodist, Presbyterian and Church of Christ in that order. Amongst the denominations with the largest number of adherents, the greatest proportional increases since 1933 were recorded by Methodists, 27.4 per cent.; Roman Catholic and Catholic combined, 21.8 per cent.; Church of England, 15.3 per cent.; and Presbyterian, 4.2 per cent.

In 1933 and again in 1947, 99 per cent. of those who stated their religion professed the Christian faith. Since the previous Census, the number who stated they were of non-Christian religion increased by 28 per cent., and those specifically stating they had no religion increased by 71 per cent.

POPULATION: RELIGION, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Religion.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Christian—							
Baptist	49,654	56,220	105,874	53,197	60,330	113,527	7,653
Brethren	4,501	5,542	10,043	5,807	7,195	13,002	2,959
Catholic, Greek ..	8,435	3,476	11,911	10,078	6,934	17,012	5,101
Catholic, Roman(*a*) ..	577,997	583,458	1,161,455	325,163	288,023	613,186	— 548,269
Catholic, undefined(*a*) ..	63,861	63,681	127,542	448,959	507,581	956,540	828,998
Church of Christ ..	28,820	33,934	62,754	33,276	38,495	71,771	9,017
Church of England ..	1,297,589	1,267,529	2,565,118	1,480,527	1,476,505	2,957,032	391,914
Congregational ..	30,411	34,791	65,202	29,364	33,879	63,243	— 1,959
Lutheran	32,569	28,234	60,803	34,854	32,037	66,891	6,088
Methodist	331,602	352,420	684,022	425,745	445,680	871,425	187,403
Presbyterian	356,743	356,486	713,229	366,892	376,648	743,540	30,311
Protestant, undefined ..	37,750	35,014	72,764	36,708	36,562	73,270	506
Salvation Army ..	14,297	16,913	31,210	17,542	20,030	37,572	6,362
Seventh Day Adventist	5,992	7,973	13,965	7,453	10,097	17,550	3,585
Other	19,605	22,241	41,846	27,492	29,883	57,375	15,529
Total Christian ..	2,859,826	2,867,912	5,727,738	3,303,057	3,369,879	6,672,936	945,198
Non-Christian—							
Buddhist	640	95	735	349	62	411	— 324
Chinese	298	7	305	125	33	158	— 147
Confucian	772	15	787	307	50	357	— 430
Hebrew	12,183	11,370	23,553	16,426	15,593	32,019	8,466
Mohammedan ..	1,668	209	1,877	2,334	370	2,704	827
Other	865	348	1,213	621	292	913	— 300
Total Non-Christian	16,426	12,044	28,470	20,162	16,400	36,562	8,092
Indefinite	5,181	4,085	9,266	9,838	8,870	18,708	9,442
No Religion	11,921	3,496	15,417	18,888	7,440	26,328	10,911
No Reply	473,757	375,191	848,948	445,425	379,399	824,824	— 24,124
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(*a*) So described in individual Census Schedules.

NOTE.—Minus sign (—) denotes decrease.

6 **Birthplace.**—At 30th June, 1947, the Australian-born element of the population of Australia represented 90.2 per cent. as compared with 86.4 per cent. at the 1933 Census. The number of Australian-born increased by 1,108,605 or by 19.4 per cent. since 1933.

On the other hand the overseas-born population declined during the same period by 159,086 or by 17.6 per cent. The principal contribution to the decline of the overseas-born population was the decrease of approximately 171,000 in the number of persons born in the British Isles.

There was little change during the intercensal period in the number of persons of Asiatic, African or American birthplace, but persons born in these continents form a very small percentage of the population of Australia.

Of persons born outside Australia, 56 per cent. were males and 44 per cent. females.

POPULATION : BIRTHPLACES, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Birthplace.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Australia	2,848,282	2,878,284	5,726,566	3,380,324	3,454,847	6,835,171	1,108,605
New Zealand	23,837	22,126	45,963	21,890	21,720	43,610	— 2,353
Other Australasian	468	306	774	776	810	1,586	812
Total Australasia	2,872,587	2,900,716	5,773,303	3,402,990	3,477,377	6,880,367	1,107,064
England	268,849	217,982	486,831	205,330	176,262	381,592	— 105,239
Wales	8,492	5,994	14,486	6,859	5,005	11,864	— 2,622
Scotland	73,488	59,001	132,489	55,734	47,264	102,998	— 29,491
Ireland	41,576	37,076	78,652	23,943	20,870	44,813	— 33,839
Germany	10,826	6,016	16,842	8,955	5,612	14,567	— 2,274
Greece	6,548	1,789	8,337	9,115	3,176	12,291	3,955
Italy	20,064	6,692	26,756	22,506	11,126	33,632	6,876
Other European	31,456	11,790	43,246	33,003	16,846	49,849	6,603
Total Europe	461,299	346,340	807,639	365,445	286,161	651,606	— 156,033
British India and Ceylon	4,955	2,457	7,412	5,247	2,913	8,160	748
China	8,072	507	8,579	5,135	1,269	6,404	— 2,175
Other Asiatic	6,279	2,289	8,568	5,708	3,824	9,532	964
Total Asia	19,306	5,253	24,559	16,090	8,006	24,096	— 463
Union of South Africa	3,271	2,908	6,179	3,071	2,795	5,866	— 313
Other African	926	716	1,642	906	765	1,671	29
Total Africa	4,197	3,624	7,821	3,977	3,560	7,537	— 284
Canada	2,621	1,299	3,920	2,300	1,709	4,009	89
United States of America	3,569	2,497	6,066	3,794	2,438	6,232	166
Other American	965	628	1,593	783	606	1,389	— 204
Total America	7,155	4,424	11,579	6,877	4,753	11,630	51
Polynesia	1,582	1,305	2,887	1,526	1,619	3,145	258
At Sea	985	1,066	2,051	465	512	977	— 1,074
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

NOTE.—Minus sign (—) denotes decrease.

7. **Period of Residence in Australia.**—The decline, until recently, in immigration into Australia is reflected in the figures in this table, which classifies the immigrant population of Australia according to period of residence in Australia. They show that, of persons born outside Australia who stated their period of residence, 5.7 per cent. had resided in Australia for a period of less than 5 years, 11.2 per cent. for less than 10 years. and 14.8 per cent. for less than 15 years, compared with 5.7, 25.5 and 39,5 per cent. respectively at the previous Census in 1933.

IMMIGRANT POPULATION : PERIOD OF RESIDENCE, AUSTRALIA, 1933 AND 1947.

PERSONS BORN OUTSIDE AUSTRALIA.

Number of Completed Years of Residence.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase. 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
0	7,407	2,783	10,190	16,660	9,953	26,613	16,423
1	2,133	1,856	3,989	4,116	4,953	9,069	5,080
2	2,243	2,277	4,520	2,124	1,322	3,446	— 1,074
3	5,683	5,411	11,094	822	462	1,284	— 9,810
4	10,761	9,121	19,882	671	319	990	— 18,892
0–4	28,227	21,448	49,675	24,393	17,009	41,402	— 8,273
5–9	104,664	68,661	173,325	22,435	17,066	39,501	— 133,824
10–14	66,084	56,685	122,769	13,507	12,769	26,276	— 96.493
15–19	26,987	26,098	53,085	28,647	25.605	54,252	1,167
20–24	113,060	77,714	190,774	92,599	60,211	152,810	— 37,964
25–29	23.203	10.938	34,141	43.338	41,432	84,770	50.629
30–34	16,473	8,331	24,804	41,394	39.367	80,761	55,957
35–39	11,187	6,304	17,491	74,005	47,568	121,573	104,082
40–44	22,110	17,196	39,306	14,111	7,327	21,438	— 17,868
45–49	36,670	28,297	64,967	8,822	5,424	14,246	— 50,721
50–54	27,147	20,486	47,633	6,518	5,543	12,061	— 35,572
55–59	11,412	9,432	20,844	9,953	9,701	19,654	— 1,190
60–64	5,739	5,427	11,166	15,301	16,049	31,350	20,184
65–69	3,751	4,424	8,175	5,861	6,293	12,154	3,979
70–74	2,937	3,673	6,610	2,857	3,495	6,352	— 258
75–79	2,672	4.050	6,722	816	1,056	1,872	— 4,850
80–84	1,246	1,926	3,172	576	874	1,450	— 1,722
85–89	113	167	280	165	258	423	143
90–94	26	44	70	70	182	252	182
95–99	3	5	8	5	13	18	10
100 and over	..	1	1	1	1	2	1
Not Stated	15,118	13,137	28,255	11,672	9,898	21,570	— 6,685
Born outside Australia	518,829	384,444	903,273	417,046	327.141	744,187	— 159,086
Born in Australia	2,848,282	2,878,284	5,726,566	3,380,324	3,454,847	6,835,171	1,108,605
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949.519

NOTE.—Minus sign (—) denotes decrease.

8. **Nationality.**—The number of foreign nationals in Australia decreased since the 1933 Census by 36 per cent.—males by 40 per cent. and females by 18 per cent.—as compared with an increase of 15 per cent. in the number of British nationality. There was little change, however, in the proportion of foreign nationals relative to the total population, 99.5 per cent. of the population being British subjects, as compared with 99.1 per cent. at the previous Census. The principal foreign nationals in Australia were Italian, 7,172 ; Chinese, 4,858 ; Greek, 4,504 ; United States of America, 3,351 ; German. 2,361 ; Yugoslav, 2,096 ; and Dutch, 2,001.

The number of persons in Australia who were born in countries outside the British Empire totalled approximately 128,000, and of this number 38,653, or 30 per cent., were of foreign nationality at 30th June, 1947, the remainder being British subjects, mainly by naturalization.

POPULATION : NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Nationality.	Census, 30th June, 1933. Males.	Census, 30th June, 1933. Females.	Census, 30th June, 1933. Persons.	Census, 30th June, 1947. Males.	Census, 30th June, 1947. Females.	Census, 30th June, 1947. Persons.	Increase, 1933–47.
British..	3,318,228	3,251,290	6,569,518	3,768,091	3,772,614	7,540,705	971,187
Foreign—							
American (U.S.) ..	1,904	653	2,557	2,474	877	3,351	794
Chinese	7,615	177	7,792	4,329	529	4,858	— 2,934
Danish	1,046	233	1,279	393	89	482	— 797
Dutch	786	129	915	1,408	593	2,001	1,086
Estonian	515	323	838	159	96	255	— 583
Finnish	962	100	1,062	381	43	424	— 638
French	924	723	1,647	770	551	1,321	— 326
German	2,738	934	3,672	1,669	692	2,361	— 1,311
Greek	4,639	1,013	5,652	3,720	784	4,504	— 1,148
Italian	14,068	3,590	17,658	5,473	1,699	7,172	— 10,486
Japanese	1,937	147	2,084	70	8	78	— 2,006
Norwegian	1,150	88	1,238	685	60	745	— 493
Polish	1,008	749	1,757	839	721	1,560	— 197
Russian	1,283	772	2,055	333	210	543	— 1,512
Spanish	463	133	596	158	50	208	— 388
Swedish	1,274	96	1,370	548	47	595	— 775
Swiss	680	272	952	321	127	448	— 504
Yugoslav	2,503	323	2,826	1,753	343	2,096	— 730
Other	3,347	962	4,309	3,796	1,855	5,651	1,342
Total Foreign ..	48,842	11,417	60,259	29,279	9,374	38,653	— 21,606
Not Stated	41	21	62	..	..	..	— 62
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

NOTE.—Minus sign (—) denotes decrease.

9. **Race.**—The people of Australia may be classified into two groups with respect to racial characteristics, namely, non-indigenous and indigenous. The former group comprises the European and other races who have migrated to Australia and their descendants born in Australia, while the latter group consists of the full-blood aboriginal natives of Australia whose estimated number at 30th June, 1944 was about 47,000, but who are not included in the general population figures of Australia. The non-indigenous population of Australia is fundamentally British in race and nationality.

At the 30th June, 1947, 7,524,129 persons or 99.3 per cent. of the population were of full-blood European race and 0.7 per cent. of non-European and half-caste. Full blood non-Europeans decreased from 22,780 in 1933 to 21,495 in 1947, but the number of half-castes increased from 27,066 to 33,734 during the same period.

The principal full-blood non-Europeans in Australia were Chinese, 9,144 ; Polynesian, 5,332 ; Natives of India, 2,480 ; and Syrian, 1,675 ; while half-caste Australian aboriginals, who increased from 20,620 in 1933 to 27,179 in 1947, represented 80.6 per cent. of the total half-caste population.

POPULATION : RACE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Race.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Full-blood—							
European	3,334,775	3,245,218	6,579,993	3,765,238	3,758,891	7,524,129	944,136
Non-European—							
Chinese	9,311	1,535	10,846	6,594	2,550	9,144	— 1,702
Cingalese	196	78	274	97	53	150	— 124
Filipino	214	78	292	133	102	235	— 57
Indian (*a*)	2,216	188	2,404	2,278	202	2,480	76
Japanese	2,007	234	2,241	108	49	157	— 2,084
Malay	813	156	969	425	155	580	— 389
Polynesian(*b*)	1,185	562	1,747	2,840	2,492	5,332	3,585
Syrian	1,553	1,327	2,880	888	787	1,675	— 1,205
Other	814	313	1,127	1,244	498	1,742	615
Total Non-European Full-blood ..	18,309	4,471	22,780	14,607	6,888	21,495	— 1,285
Half-caste—							
Australian Aboriginal ..	10,631	9,989	20,620	14,026	13,153	27,179	6,559
Chinese	1,901	1,602	3,503	1,599	1,351	2,950	— 553
Indian (*a*)	360	334	694	235	183	418	— 276
Japanese	116	109	225	32	24	56	— 169
Negro	119	89	208	79	45	124	— 84
Polynesian (*b*) ..	295	294	589	359	353	712	123
Syrian	149	153	302	111	112	223	— 79
Other	456	469	925	1,084	988	2,072	1,147
Total Half-caste ..	14,027	13,039	27,066	17,525	16,209	33,734	6,668
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(*a*) Native of India. (*b*) Includes Maori, Fijian, Papuan, and Torres Strait Islanders.
NOTE.—Minus sign (—) denotes decrease.

10. **Industry.**—In the following table the male and female populations of Australia are classified according to the industry in which they are usually engaged. If the 124,439 persons (84,673 males and 39,766 females) for whom no particulars regarding industry were given on the Census schedules are included, the number of persons "in the work force" is 3,196,431, of whom 2,479,269 were males and 717,162 were females. It is believed that subsequent tabulations will furnish evidence to enable most, if not all, of the 124,439 persons in "Industry Not Stated" to be included in the work force. The remainder of the population, totalling 4,382,927 (1,318,101 males and 3,064,826 females), were classified as not being in the work force. The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners, unpaid helpers engaged in industry, and those who usually work for their living but who have lost their jobs.

Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners, and permanent inmates of institutions are regarded as not being in the work force.

On the average, 65 in every 100 of the male population and 19 in every 100 of the female population were in the work force, or in other words there were, in 1947, 3½ males to every female in the work force.

Of the males in the work force who stated their industry, those engaged in Manufacturing represented the largest proportion, namely 27.0 per cent., followed next in order by those in Primary Production, 19.8 per cent.; Commerce, 11.6 per cent.; Transport and Storage, 9.7 per cent.; Building and Construction 9.7 per cent.; and Public Authority (n.e.i.) and Professional Activities, 8.8 per cent.

As with the males, females in the work force who stated their industry were most largely engaged in Manufacturing, 27.2 per cent.; followed next in order by those in Public Authorities (n.e.i.) and Professional Activities, 20.6 per cent; Amusement, Hotels, Cafés, Personal Service, etc., 19.2 per cent.; and Commerce, 18.8 per cent.

POPULATION: NUMBER ENGAGED IN INDUSTRY, AUSTRALIA, 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Industry Group.	Census, 30th June, 1947.		
	Males.	Females.	Persons.
Primary Production—			
Fishing, Hunting and Trapping	16,311	82	16,393
Agriculture, Grazing and Dairying—			
Agriculture and Mixed Farming	232,682	7,958	240,640
Grazing	89,331	4,938	94,269
Dairying	96,508	10,018	106,526
Other	16,671	1,396	18,067
Total Agriculture, etc.	435,192	24,310	459,502
Forestry	22,078	46	22,124
Total	473,581	24,438	498,019
Mining and Quarrying	53,838	553	54,391
Manufacturing—			
Founding, Engineering and Metalworking (including Shipbuilding)	190,687	17,918	208,605
Manufacture of Clothing	19,904	69,309	89,213
Manufacture of Food and Drink	94,999	18,984	113,983
Paper, Printing, Bookbinding and Photography	42,557	15,148	57,705
Other, including Inadequately Described	297,571	62,723	360,294
Total	645,718	184,082	829,800
Building and Construction—			
Construction and Repair of Buildings	120,777	914	121,691
Construction Works and Maintenance (other than Buildings)	110,222	385	110,607
Total, including Inadequately Described	231,134	1,299	232,433
Transport and Storage—			
Road Transport and Storage	105,732	4,922	110,654
Shipping and Loading and Discharging Vessels	48,695	1,666	50,361
Rail and Air Transport	73,944	6,926	80,870
Total, including Inadequately Described	232,539	13,837	246,376
Communication	34,534	14,657	49,191
Finance and Property	52,443	21,268	73,711
Commerce	278,026	127,493	405,519
Public Authority n.e.i. and Professional Activities	209,436	139,375	348,811
Amusement, Hotels, Cafés, Personal Service, etc.	95,240	130,326	225,566
Other and Inadequately Described Industries	88,107	20,068	108,175
Industry Not Stated	84,673	39,766	124,439
Persons not in Work Force	1,318,101	3,064,826	4,382,927
Grand Total	3,797,370	3,781,988	7,579,358

11. **Occupational Status.**—The term "occupational status" has been substituted for "grade of occupation" formerly in use, and it relates to the capacity in which persons are engaged in the various branches of industry.

The number of employers in Australia at 30th June, 1947 was 221,289 compared with 207,680 at the previous Census. Persons who were self-employed or working on their own account increased from 369,375 in 1933 to 387,137 in 1947. Of the males in the work force, 74.4 per cent. were employees receiving wages or salaries at 30th June, 1947, and the corresponding proportion of female employees receiving wages or salaries was 87.3 per cent.

Persons not at work, consisting of the unemployed and those not actively seeking a job at 30th June, 1947, amounted to 82,774, consisting of 66,009 males and 16,765 females.

At the Census of 30th June, 1947, 29,013 persons gave no answer to the question regarding occupational status, but, as with persons for whom no industry was stated, it is believed that subsequent tabulations will disclose that the majority, if not all, of these persons should be classified to the work force.

In 1933, wage-earners who were employed part-time were asked to indicate that fact on the Census Schedule in answer to the question regarding occupational status, and all those who so described themselves are included in the work force for that year. In 1947, however, persons working regularly, but for considerably less than normal working hours, were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

POPULATION : OCCUPATIONAL STATUS, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Occupational Status.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase 1933–47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
In Work Force—							
At Work—							
Employer	186,849	20,831	207,680	196,932	24,357	221,289	13,609
Self-employed ..	318,951	50,424	369,375	342,650	44,487	387,137	17,762
Employee (on wage or salary)	1,184,002	434,502	1,618,504	1,827,072	620,421	2,447,493	828,989
Helper (not on wage or salary)	40,754	5,262	46,016	24,227	4,498	28,725	− 17,291
Total at Work ..	1,730,556	511,019	2,241,575	2,390,881	693,763	3,084,644	843,069
Not at Work (*a*)	405,269	75,775	481,044	66,009	16,765	82,774	−398,270
Total in Work Force	2,135,825	586,794	2,722,619	2,456,890	710,528	3,167,418	444,799
Not in Work Force (*b*) ..	1,226,806	,674,756	3,901,562	1,318,101	3,064,826	4,382,927	481,365
Not Stated	4,480	1,178	5,658	22,379	6,634	29,013	23,355
Grand Total	3,367,111	,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(*a*) Includes persons who were (1) unable to secure employment; (2) temporarily laid off from their jobs; and (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason. (*b*) *See* last preceding paragraph above.

NOTE.—Minus sign (−) denotes decrease.

12. **Other General Characteristics.**—Questions regarding orphanhood, and the ability to read and write a foreign language, of persons who could not read and write English, were not asked on the schedules of the 1947 Census. Consequently, the latest Census data available concerning these questions are those of the 1933 Census, as published in previous issues of the Year Book.

Details of the causes and duration of unemployment of persons who stated that they were out of work at the time of the 1947 Census are not yet available.

§ 8. Oversea Migration.

Classes of Arrivals and Departures, p. 733.—Arrivals and departures during 1947 were :—Permanent new arrivals, 31,765 ; Australian residents returning from abroad, 18,305 ; temporary visitors arriving, 17,698 ; total arrivals, 67,768 : Australian residents departing permanently, 19,579 ; Australian residents departing temporarily, 18,764 ; temporary visitors departing, 18,814 ; total departures, 57,157. Permanent migration refers to persons, other than Australian troops and dependants, intending residence for a year or more—in Australia in the case of arrivals and abroad in the case of departures. Temporary migration refers to persons intending residence for shorter periods and, as from 1st July, 1947, Australian troops and dependants, irrespective of period of residence. For the six months ended June, 1947, all figures exclude troop movements.

CHAPTER XVII.—VITAL STATISTICS.

§ 1. Marriages. § 2. Fertility and Reproduction, and § 3. Mortality.

Numbers and Rates, pp. 742-3, 754–5, 767–8 and 772.—The following table shows totals and rates for marriages, births, deaths, and infant deaths for 1947 :—

MARRIAGES, BIRTHS, DEATHS AND INFANTILE DEATHS, 1947.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Marriages	30,172	20,437	10,999	6,668	5,282	2,584	124	191	76,457
Rate (*a*) ..	10.11	9.95	9.95	10.32	10.50	10.02	11.39	11.30	10.09
Births ..	69,398	47,366	28,358	16,317	12,874	7,140	276	655	182,384
Rate(*a*) ..	23.25	23.06	25.65	25.25	25.60	27.70	25.34	38.75	24.06
Deaths	28,449	21,442	10,116	6,215	4,723	2,363	65	95	73,468
Rate(*a*)	9.53	10.44	9.15	9.62	9.39	9.17	5.97	5.62	9.69
Infantile Deaths ..	2,069	1,245	874	396	398	195	12	13	5,202
Rate(*b*)	29.81	26.28	30.82	24.27	30.92	27.31	43.48	19.85	28.52

(*a*) Number per 1,000 of mean population revised in accordance with the final results of the 1947 Census. (*b*) Number of deaths under 1 year per 1,000 of live births registered.

CHAPTER XVIII.—MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 808-9.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the years 1946 and 1947 :—

MINERAL PRODUCTION : QUANTITIES AND VALUES, AUSTRALIA.

Year.	Coal.		Copper and Copper Ore.	Gold.	Ironstone and Ore.	Lead.	Silver.	Silver-lead Ore, Concentrates.	Tin and Tin Ore.	Zinc and Concentrates.	All Minerals
	Black.	Brown.									
					QUANTITIES.						
	'000 tons.	'000 tons.	Tons.	Fine oz.	'000 tons.	Tons.	'000 oz.	Tons.	Tons.	Tons.	
1946	13,882	5,707	19,160	824,480	1,833	19,682	2,185	215,928	2,460	303,132	
1947	14,831	6,140	14,040	937,654	2,156	37,330	3,342	212,432	2,909	293,149	
					VALUES (£'000.).						
1946	13,535	706	1,715	8,873	2,104	969	470	6,971	743	2,698	40,547
1947	15,701	937	1,693	10,092	2,470	3,149	625	10,555	1,026	4,809	53,540

CHAPTER XIX.—PASTORAL PRODUCTION.

Live-stock, Meat and Wool Produced.—The following table shows, for each State, the numbers of live-stock at 31st March, 1948, and the amounts of meat and wool produced during 1946–47 and 1947–48 :—

LIVE-STOCK, MEAT AND WOOL PRODUCED.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.Terr.	A.C.T.	Australia.
HORSES ('000.), p. 860.									
1948 ..	376.1	221.5	335.6	100.6	74.5	23.1	32.3	1.0	1,164.7
CATTLE ('000.), p. 862.									
1948 ..	3,129.8	2,174.2	5,975.5	445.3	815.6	244.1	991.4	8.7	13,784.6
SHEEP ('000.), p. 866.									
1948 ..	46,065.0	17,931.2	16,742.6	9,055.2	10,443.8	2,086.5	19.1	215.2	102,558.6
PIGS ('000.), p. 988.									
1948 ..	365.2	271.5	378.1	100.3	93.2	45.1	0.7	0.6	1,254.7
BEEF, INCLUDING VEAL ('000 TONS BONE-IN WEIGHT), p. 864.									
1946–47 ..	139.9	95.6	190.2	24.4	26.3	8.2	2.7	0.5	487.8
1947–48(*a*)	160.3	102.4	232.0	26.1	29.3	7.2	3.2	0.6	561.1
MUTTON AND LAMB ('000 TONS BONE-IN WEIGHT), p. 869.									
1946–47 ..	110.1	111.7	18.7	31.6	22.5	7.2	..	0.8	302.6
1947–48(*a*)	104.3	106.3	19.3	33.3	24.1	6.7	..	0.9	294.9
TOTAL MEAT (INCLUDING PIGMEATS) IN TERMS OF FRESH ('000 TONS BONE-IN WEIGHT).									
1946–47 ..	277.9	229.3	231.4	65.8	58.6	18.0	2.8	1.4	885.2
1947–48(*a*)	287.6	230.5	272.3	69.1	61.0	16.9	3.3	1.5	942.2
WOOL (AS IN THE GREASE) PRODUCED ('000 lb.), p. 872.									
Season—					(*b*)		(*c*)		
1946–47	432,621	197,076	144,820	93,020	90,255	16,643	305	2,038	976,778
1947–48	422,260	191,004	143,290	103,676	95,410	15,326	305	1,767	973,038

(*a*) Subject to revision. (*b*) For year ended previous December. (*c*) Estimated.

CHAPTER XX.—AGRICULTURAL PRODUCTION.

§ 3. Distribution, Production and Value of Crops.

Principal Crops, pp. 892–4.—The table hereunder shows the area, production and average yield per acre of the principal crops in Australia during the 1946–47 and 1947–48 seasons :—

PRINCIPAL CROPS : AUSTRALIA.

Season.	Grain.			Hay.	Sugar-cane.	Cane sugar.	Total Crops.
	Wheat.	Oats.	Maize.				
AREA ('000 acres.)							
1946–47	13,180	1,728	260	2,006	324	..	21,077
1947–48	13,880	2,105	223	1,970	345	..	22,272
PRODUCTION.							
	'000 bush.	'000 bush.	'000 bush.	'000 tons.	'000 tons.	'000 tons.	
1946–47	117,262	15,566	5,808	2,357	4,027	552	
1947–48	220,116	40,697	6,168	3,008	4,418	605	
AVERAGE YIELD PER ACRE.							
	Bush.	Bush.	Bush.	Tons.	Tons. (a)	Tons. (a)	
1946–47	8.90	9.01	22.36	1.18	17.74	2.43	
1947–48	15.86	19.33	27.69	1.53	19.86	2.72	

(a) Per acre of productive crop.

§ 4. Wheat.

Survey of Legislation relating to Wheat Industry, p. 899.—(i) *Control during* 1914–18 *and* 1939–45 *Wars.* Attempts to stabilize the wheat industry in Australia have extended over a long period of years, but the only occasions on which it was subject to control occurred during the 1914–18 and 1939–45 Wars, and then only by reason of the constitutional powers held by the Commonwealth under war-time legislation.

In both wars serious dislocation of trade, mainly through shipping difficulties, caused large accumulations of wheat, which necessitated Governmental action to arrange for its storage and disposal, as well as the financing of sales and the reimbursement of growers.

In the 1914–18 War the Commonwealth, in conjunction with the States of New South Wales, Victoria, South Australia and Western Australia, established the Wheat Marketing Scheme which operated until 1921. During the 1939–45 War the Australian Wheat Board, created by the Commonwealth under National Security Regulations, was the sole authority for the marketing of wheat.

(ii) *Pool System.* After the termination of the Australian Wheat Marketing Scheme in 1921, the marketing of wheat during the 1921–22 harvest did not return wholly to the open market conditions which operated prior to 1914, but continued under a combination of open market selling and pools. Voluntary pools were established in New South Wales, Victoria and South Australia while a compulsory pool was created under State legislation in Western Australia. In the following season (1922–23) voluntary pools operated in all four States; Western Australia abandoning the compulsory method.

The following table shows the proportion of the marketable wheat which passed through the State pools in the four chief producing States at five-yearly intervals since the introduction of the pool system in 1921–22, as well as for the pre-war year 1938–39. It is indicative of the extent of the support which growers gave to the pools.

PERCENTAGE OF WHEAT RECEIVED BY VOLUNTARY POOLS IN THE FOUR CHIEF PRODUCING STATES.

Harvest.	N.S.W.	Victoria.	S. Aust.	W. Aust.
	%	%	%	%
1921–22	58	78	36	(*a*) 96
1925–26	2	14	22	36
1931–32	2	39	24	42
1935–36	(*b*)	5	3	18
1938–39	(*b*)	1	4	28

(*a*) Compulsory pool. (*b*) Pool did not operate in these years.

(iii) *Financial Assistance to Wheat Growers.* Prior to 1931–32 no financial assistance had been rendered by the Commonwealth to wheat growers, but when the price of wheat fell to less than 2s. 6d. per bushel by December, 1930, the position of growers became most difficult. To alleviate this, the Commonwealth Government assisted growers, either in the form of a bounty or relief, and amounts totalling £3,400,000 were distributed in 1931–32, £2,000,000 in 1932–33, £3,000,000 in 1933–34, £4,000,000 in 1934–35 and £2,000,000 in 1935–36. As prices improved, Commonwealth assistance was discontinued, but when prices again fell in 1938–39 it was resumed and continued until 1944–45, the amounts distributed being £1,800,000 in 1938–39, £2,500,000 in 1939–40, £2,500,000 in 1940–41, £1,700,000 in 1941–42, £2,200,000 in 1942–43, £4,300,000 in 1943–44 and £4,100,000 in 1944–45. In all, £33,500,000 was distributed to wheat growers by the Commonwealth between 1931–32 and 1944–45.

(iv) *Wheat Industry Assistance Act* 1938. The first attempt to stabilize the price of wheat in Australia occurred in 1938 when the Commonwealth enacted the Wheat Industry Assistance Act 1938 which supplemented legislation passed by each of the several States. The purpose of these Acts, which became effective in December, 1938, was to stabilize the price of wheat used for flour for home consumption at 5s. 2d. per bushel, bagged, f.o.r. Williamstown, Victoria, which approximates 4s. 8d. per bushel at country sidings. This price was to be maintained by millers paying a tax on flour used in Australia when the price of wheat fell below that level, or by a tax on wheat sold to wheat merchants should it exceed that level. Funds raised by the tax on flour were distributed to growers through the States and the amounts so distributed between 1938 and 1948 are shown in the table below.

The tax on wheat was not proclaimed and did not operate at any time. In December, 1947 the tax rate on flour became nil because of the rise in wheat prices.

FLOUR TAX RECEIPTS AND DISBURSEMENTS : AUSTRALIA.

Year ended November—	Gross Receipts Less Refunds and Expenses.	Less Special Payments under—		Amount paid for distribution to Growers.
		Section 7. (a)	Section 14. (b)	
	£	£	£	£
1939	3,337,234	500,000	133,746	2,703,488
1940	1,450,169	500,000	50,089	900,080
1941	1,545,793	500,000	53,215	992,578
1942	1,651,604	500,000	57,362	1,094,242
1943	1,680,594	500,000	52,875	1,127,719
1944	1,939,117	..	51,469	1,887,648
1945	1,918,299	..	55,328	1,862,971
1946	1,663,907	843,000	60,659	760,248
1947	1,749,978	..	61,570	1,688,408
1948	285,582	..	..	285,582

(a) Payments to eliminate marginal wheat areas. (b) Special grant to Tasmania.

(v) *Other Commonwealth Legislation.* Other legislation passed by the Commonwealth Government subsequent to the Wheat Industry Assistance Act 1938 included the Wheat Industry (War-time Control) Act 1939 which diverted the funds obtained from the flour tax to the Australian Wheat Board. Other Acts making provision for a tax on wheat were passed in 1940 but the tax did not operate and was repealed by legislation passed in 1944. Under the latter legislation, a guaranteed price of 4s. 0d. per bushel, bagged, at sidings, which was later raised to 4s. 1½d., was fixed for wheat acquired by the Commonwealth. In 1946 the Wheat Industry Assistance Act 1946 was passed, making provision for the elimination of additional marginal wheat areas.

This legislation was mainly machinery-like in character and was designed to assist the industry through the abnormal war-time period.

(vi) *Wheat Industry Stabilization Act* 1946. The Wheat Industry Stabilization Act passed by the Commonwealth Government in 1946 was the first legislative measure which attempted to establish a permanent wheat marketing organization on a nation-wide basis. This plan developed from the Premiers' Conference held in January of that year, at which it was agreed that joint action should be taken by all Australian Governments to give effect to the proposals agreed upon. All States, however, did not pass the complementary legislation necessary to give effect to this proposal, and consequently, in the absence of Commonwealth powers in respect of internal marketing, the 1946 Act did not function, except for the establishment of a stabilization fund into which tax contributions levied under the Wheat Export Charge Act 1946 and the Wheat Tax Act 1946 were paid.

(vii) *Modifications* (*July,* 1948) *of* 1946 *Plan.* A further attempt to establish a permanent wheat marketing authority in Australia was made in July, 1948, when the Commonwealth Minister for Commerce and Agriculture met State Ministers for Agriculture in a conference at which agreement was reached on certain modifications to the 1946 plan.

The principal amendment was that control of production was not required and that the State Governments would undertake the regulation of wheat growing in marginal areas. This modified plan was subsequently adopted by a majority of growers in the four main producing States in polls arranged by the respective State Governments. The results of these polls were as follows :—

RESULTS OF POLLS OF WHEAT GROWERS ON THE QUESTION OF ADOPTION OF THE COMMONWEALTH WHEAT STABILIZATION PLAN AS MODIFIED IN JULY, 1948.

State.	For.	Against.	In Favour
	No.	No.	%
New South Wales	8,951	6,360	58.5
Victoria	11,275	3,495	76.4
South Australia	5,729	4,090	58.3
Western Australia	3,957	2,426	61.9
Total	29,912	16,371	64.6

The requisite legislation was passed by Commonwealth and State Governments prior to the end of 1948, and for the first time in the history of the industry a peace-time plan for the internal and external marketing of wheat was established with one central marketing authority. The plan came into operation with the 1948–49 season and will continue for a period of five years up to the end of the 1952–53 season.

(viii) *Provisions of* 1948 *Plan.* The principal provisions of the plan embodied in the Commonwealth Wheat Industry Stabilization Act 1948 and Wheat Export Charge Act 1948 (which also provided for the repeal of the earlier Commonwealth legislation passed in 1946) are as follows :—

(1) The Commonwealth Government shall guarantee a price (6s. 3d. per bushel f.o.r., ports, bulk basis for the 1947–48 season) for wheat grown and delivered by wheat growers.

(2) The guaranteed price, which is based on ascertained costs for the 1947–48 season, shall vary according to an index of production costs for each season starting with the 1948–49 crop. (Following a review of costs for the 1948–49 season by the Wheat Cost of Production Committee, the guaranteed price has been increased to 6s. 8d. per bushel f.o.r., ports, bulk basis.)

(3) The guarantee shall apply to the wheat crops marketed through approved organizations for the period up to the end of the 1952–53 season.

(4) Approved organizations shall be the Australian Wheat Board and those organizations which are empowered by State Governments with authority to receive wheat and to market it as the agents for the Australian Wheat Board.

(5) The Commonwealth shall ensure the guaranteed price in respect of the export from any one season's crop, provided that this guarantee shall not apply to the quantity of export in excess of 100 million bushels.

(6) A Stabilization Fund shall be established by means of a tax on wheat exported to meet the guaranteed price above mentioned.

(7) The tax shall apply when the export price is higher than the guaranteed price, and shall be 50 per cent. of the difference between the two but shall not exceed 2s. 2d. per bushel.

(8) The tax shall apply to the 1947–48 and later wheat crops.

(9) The Commonwealth agrees that it will not hold an excessive amount in the Fund, and it will consider a refund of tax to the oldest contributing pool whenever the financial prospects of the Fund justify it. (Refunds of amounts contributed in respect of the 1945–46 and 1946–47 harvests have already been approved).

(ix) *Complementary State Acts* 1948. The respective State Wheat Industry Stabilization Acts 1948 are complementary to the Commonwealth Act and came into operation on 25th November, 1948, the date on which the Commonwealth Act received Royal assent. The principal provisions of the State Acts are—

(*a*) The Australian Wheat Board is afforded State statutory authority to act, as provided in the Commonwealth Act, in respect of—

- (i) The purchase or other acquisition, the sale or other disposal and the control of all matters relating to the handling, storage, treatment, shipment, etc., of wheat or wheat products;
- (ii) The licensing of any person, firm, company or State Authority to receive wheat on its behalf;
- (iii) The fixation of the home consumption price for wheat at the same level as the price guaranteed by the Commonwealth and determined as provided in the Commonwealth Act.
- (iv) Other matters specified.

(*b*) In Queensland and Western Australia the respective State Wheat Boards are empowered to act as agents of the Australian Wheat Board, are entitled to be licensed to receive wheat on behalf of the Australian Wheat Board, and each is empowered to nominate one of its members as a growers' representative to the Australian Wheat Board.

(*c*) In New South Wales a State Wheat Committee is established to nominate one of its members as a growers' representative to the Australian Wheat Board and to advise the State Minister on wheat matters. It may act as agent of the Australian Wheat Board. The New South Wales Act also empowers the State Minister to exercise control over wheat growing in specified marginal areas of the State.

(x) *The Australian Wheat Board and the Stabilization Fund.* The Australian Wheat Board, as reconstituted under the Commonwealth Wheat Industry Stabilization Act 1948, commenced to perform its functions under the Act on 18th December, 1948.

The provisions of the Commonwealth Wheat Stabilization Plan relating to the levy of a tax on wheat exported and the establishment of a Stabilization Fund have been implemented by the Commonwealth Government under legislation passed in 1946 in respect of the 1945–46, 1946–47 and 1947–48 harvests. Contributions to the Stabilization Fund have amounted to about £7,000,000 and £4,000,000 from the 1945–46 and 1946–47 harvests respectively, and are expected to reach approximately £15,000,000 from the 1947–48 harvest. The Commonwealth Wheat Tax (Repeal and Refund) Act 1948, which repealed the Wheat Tax Act 1946, provides for the refund to growers, through the Australian Wheat Board, of the amounts contributed to the fund from the 1945–46 and 1946–47 harvests, which are equivalent to approximately 1s. 1½d. per bushel and 10½d. per bushel, respectively. Refunds of contributions to the fund from the 1945–46 harvests were paid in December, 1948, and arrangements have been completed to refund to growers, early in 1949, amounts contributed for the 1946–47 harvest.

The Wheat Industry Stabilization Board operated throughout Australia under war-time Commonwealth legislation during each of the seasons 1941–42 to 1948–49. Under this legislation, provision was made for the registration of farms and licensing of areas by the Wheat Industry Stabilization Board. The area allotted to each grower was fixed in proportion to the average sown during the basic three year period, principally in the three years 1938–39 to 1940–41. Although licensing continued during the seasons 1945–46 to 1948–49, growers were permitted to plant without restriction. In Western Australia, growers' acreages during the seasons 1942–43 to 1944–45 were restricted to a maximum of two-thirds of their basic acreages. During 1945–46 no such restriction was imposed, but where growers voluntarily restricted the area sown to five-sixths or less of their basic acreage, compensation equal to one-sixth of their basic acreages was payable, subject to the qualification that half of the area licensed for wheat was cropped for grain.

The Wheat Industry Stabilization Board ceased to function in December, 1948, following the establishment of the post-war wheat stabilization plan under legislation passed by the Commonwealth and State Governments.

CHAPTER XXI.—FARMYARD, DAIRY AND BEE PRODUCTS.

Butter, Cheese, Pork, Bacon and Ham.—Particulars of the total amounts of butter and cheese (showing factory production by States and an estimate of factory and farm production for Australia), pork, bacon and ham produced in each State during 1947–48 are shown below :—

BUTTER, CHEESE, PORK, BACON AND HAM PRODUCTION, 1947–48.(*a*)

N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
BUTTER (TONS), pp. 981–2.							
33,958	56,390	46,457	9,051	7,039	4,399	..	(*b*) 161,794
CHEESE (TONS), pp. 982–3.							
2,624	16,122	9,537	11,490	1,024	414	..	(*b*) 41,343
PORK (TONS, BONE-IN WEIGHT), p. 989.							
5,283	7,070	7,175	3,107	2,395	1,298	46	(*c*) 26,407
BACON AND HAM (TONS, CURED WEIGHT), p. 990.							
13,090	10,796	10,117	4,822	3,789	1,315	..	43,929

(*a*) Subject to revision. (*b*) Includes an estimate of farm production. (*c*) Includes Northern Territory, 33 tons.

CHAPTER XXIV.—MANUFACTURING INDUSTRY.

Summary.—The tables following give a summary of the operations in manufacturing industries during 1946–47 and 1947–48 :—

MANUFACTURING INDUSTRY : SUMMARY.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1946–47.							
1. **Factories** .. No.	13,961	10,949	3,367	2,707	2,615	1,169	34,768
2. **Hands employed** (*a*) ,,	343,119	265,757	71,599	70,711	33,806	19,937	804,929
3. **Salaries and wages paid** (*b*) £	103,587,559	77,993,765	20,310,541	20,538,958	9,105,010	5,637,933	237,173,766
4. **Value of power, fuel, light, &c., used** .. £	13,964,552	7,835,022	2,627,507	3,620,194	2,049,489	923,336	31,020,100
5. ,, **materials used** £	245,436,182	176,106,507	62,134,914	52,015,884	20,472,010	12,978,867	569,144,364
6. ,, **production** £	186,546,408	131,496,150	35,336,669	31,066,494	15,748,476	10,667,545	410,861,742
7. ,, **output of factories** £	445,947,142	315,437,679	100,099,090	86,702,572	38,269,975	24,569,748	1,011,026,206
8. ,, **land and buildings** £	81,894,595	62,771,493	15,391,033	18,659,534	8,756,924	5,678,205	193,151,784
9. ,, **plant and machinery** £	75,234,273	59,124,802	19,995,249	18,408,224	8,430,574	8,499,969	189,693,091
1947–48.(*c*)							
1. **Factories** .. No.	15,194	11,661	3,642	2,865	2,788	1,225	37,375
2. **Hands employed** (*a*) ,,	363,365	278,267	76,732	73,346	35,967	21,173	848,850
3. **Salaries and wages paid** (*b*) £	125,345,878	93,805,962	24,163,216	24,852,998	10,735,647	6,865,337	285,769,038
4. **Value of power, fuel, light &c., used** .. £	17,313,940	9,014,085	3,186,651	4,280,739	2,284,627	1,015,353	37,095,395
5. ,, **materials used** £	292,556,789	209,795,552	79,128,698	61,620,640	24,956,972	15,524,694	683,583,345
6. ,, **production** £	218,610,856	158,697,691	42,928,994	38,669,705	18,384,197	12,244,517	489,535,960
7. ,, **output of factories** £	528,481,585	377,507,328	125,244,343	104,571,084	45,625,796	28,784,564	1,210,214,700
8. ,, **land and buildings** £	91,860,393	66,184,141	16,609,936	20,690,827	9,482,660	6,271,365	211,099,322
9. ,, **plant and machinery** £	86,714,082	65,828,923	21,830,685	20,239,623	9,189,910	9,915,837	213,719,060

(*a*) Average over whole year ; includes working proprietors. (*b*) Excludes amounts drawn by working proprietors. (*c*) Subject to revision.

CHAPTER XXVII.—REPATRIATION.

§ 2. War Pensions and § 3. Service Pensions.

Number of Pensioners and Expenditure, pp. 1175 and 1178.—The following table shows the number of war and service pensions in force, and expenditure for the year 1947–48 :

WAR AND SERVICE PENSIONS : NUMBER AND PAYMENTS, 1947–48.

Particulars.	Place of Payment.							Total.
	N.S.W. (*a*)	Vic.	Q'land.	S. Aust. (*b*)	W.Aust.	Tas.	Oversea.	
War Pensions—								
1914–18 War—								
Number	51,759	51,060	17,093	10,041	13,627	7,187	4,535	155,302
Amount Paid £'000	2,974	2,616	927	558	809	470	331	8,685
1939–45 War—								
Number	105,227	55,804	31,027	26,810	31,191	9,184	1,056	260,299
Amount Paid £'000	3,011	1,820	867	845	691	312	32	7,578
Service Pensions—								
Number	5,217	3,985	2,592	1,654	1,715	527	..	15,690
Amount Paid £'000	446	288	198	122	145	39	..	1,238

(*a*) Includes Australian Capital Territory. (*b*) Includes Northern Territory.

CHAPTER XXVIII.—MISCELLANEOUS.

§ 23. Valuation of Australian Production.

Net Value of Production, p. 1215.—The following table shows particulars of the net value of production in each State of the various industry groups during the year 1946–47:–

NET VALUE OF RECORDED PRODUCTION IN STATES, 1946–47.

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Agriculture ..	20,285	29,266	15,373	18,871	10,701	3,339	97,835
Pastoral	52,666	28,639	26,089	9,585	9,648	3,580	130,207
Dairying ..	14,834	18,038	10,010	4,242	1,922	812	49,858
Poultry	6,073	5,358	812	1,478	454	531	14,706
Bee-farming ..	272	255	48	218	73	6	872
Total, Rural ..	94,130	81,556	52,332	34,394	22,798	8,268	293,478
Trapping.. ..	4,632	3,037	510	426	218	557	9,380
Forestry	4,508	2,945	3,037	1,383	1,496	1,031	14,400
Fisheries ..	1,302	535	543	253	313	347	3,293
Mines and Quarries	16,496	2,054	3,044	2,069	5,057	2,856	32,476
Total, Non-rural	26,938	8,571	7,134	5,031	7,084	4,791	59,540
Total, All Primary	121,068	90,127	59,466	39,425	29,882	13,059	353,027
Factories.. ..	186,546	131,497	35,337	31,066	15,748	10,668	410,862
Total, All Industries ..	307,614	221,624	94,803	70,491	45,630	23,727	763,889

GENERAL INDEX.*

Note.—This index is followed by a list of maps, graphs and diagrams, also a list of special articles, etc., in previous issues of the Official Year Book. Area, population, etc., of particular localities are indexed under the locality concerned. Where the subject matter extends continuously over more than one page the first page only is indexed.

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